BIOCHEMISTRY MAJOR

The Biochemistry major is offered through the Department of Chemistry and Biochemistry. This option is recommended for students planning entry into graduate school in Biochemistry, Pharmacology, or related subjects. It is also strongly recommended for those desiring to pursue medical or dental school. Ten (10) lecture courses and seven (7) laboratory courses in the content area (chemistry and /or biochemistry) are required for graduation.

FIRST YEAR					
Fall Semester	Credits	Spring Semester	Credits		
General Chemistry I for Majors (CHE111)	3	General Chemistry II for Majors (CHE112)	3		
General Chemistry I Lab for Majors/Recitation	1	General Chemistry II Lab for Majors/Recitation	1		
(CHE111L) Pre-Calculus (MAT116 or MAT120)	2-4	(CHE112L) Calculus I (MAT231)	4		
First Year Composition (ENG103)	3-4	Foreign Language (FL201)	4		
African Diaspora/World I (ADW111)	4	African Diaspora/World II (ADW112)			
First Year Experience (FYE 101)	4 1	First Year Experience (FYE 102)	4 1		
First Year Seminar in Chemistry (CHE101)	0	Big Questions Colloquia (BQC100)	•		
TOTAL HOURS	16-17	TOTAL HOURS	1 18		
TOTAL HOURS	-	ORE YEAR	10		
Fall Semester			Credits		
Organic Chemistry I for Majors (CHE231)	Credits 4	Spring Semester Organic Chemistry II for Majors (CHE232)			
Organic Chemistry I Lab/Recitation (CHE233L)	1 1	Organic Chemistry II Lab/Recitation (CHE234L)	4 1		
Biology of the Cell (BIO120)		Organismal Form and Function(BIO115)	-		
Calculus II (MAT232)	4	Physics I: Mechanics & Lab (PHY151)	4		
Foreign Language (FL202)	4	Wellness & Health	4 0-1		
Sophomore Seminar-Chemistry (SYE103)	4 1	Sophomore Year Experience-Chemistry (SYE104)	1		
TOTAL HOURS	18	TOTAL HOURS			
TOTAL HOURS			14-15		
- Wa		R YEAR	a 19.		
Fall Semester	Credits	Spring Semester	Credits		
Biochemistry I (CHE311) Wellness & Health	4	Biochemistry II (CHE312)	3		
	0-1	Physical Chemistry II (CHE346)	3		
Physical Chemistry I (CHE345)	3	Physical Chemistry II Lab (CHE346L)	1		
Physics II Elec/Mag & Lab (PHY241)	4	Divisional Requirement 2	4		
Divisional Requirement 1	4	Computer Science I - C++ (CIS121) ⁵	4		
TOTAL HOURS	15 16	Biochemistry Lab (CHE313L) TOTAL HOURS	1 16		
TOTAL HOURS	15-16 SENIO		10		
Fall Compart on		R YEAR	C 4!! -		
Fall Semester Analytical Chemistry (CHE301) ¹	Credits	Spring Semester Instrumental Analysis (CHE496) ¹	Credits		
Analytical Chemistry (CHE301) Analytical Chemistry Lab (CHE301L) ¹	3	Women's or International Studies	4		
Advanced Biochemistry (CHE446) ⁴	1	Math ² or Biology Elective ³	4		
Undergraduate Research (CHE431)	3	Undergraduate Research (CHE432)	4		
Divisional Requirement 3	1-3	Elective ⁶	1-3		
	4	Liective	3-4		
Senior Seminar in Chemistry (CHE429)	1	TOTAL HOURS	16.10		
TOTAL HOURS	13-15	TOTAL HOURS	16-19		

¹ Can take either Analytical Chemistry Lecture and Lab (CHE 301 and 301L) or Instrumental Analysis (CHE 496)

² Math Electives include: Calculus III, Biostatistics, Linear Algebra or Differential Equations

³ Biology Electives include: Cellular & Molecular Biology, Genetics, Microbiology, Physiology, or other advanced or graduate level course

⁴ Can substitute with Race and Genetics (CHE 405)

⁵ Other CIS options include CIS 111, 115

⁶ Chemistry or Biochemistry elective recommended REVIEWED SUMMER 2019

CHEMISTRY MAJOR

This option is recommended for those students seeking entry into graduate school in Chemistry and related fields. Ten (10) lecture courses and seven (7) laboratory courses in the content area (chemistry/biochemistry) are required for graduation

General Chemistry I for Majors (CHE111) General Chemistry I Lab for Majors/Recitation (CHE1112) General Chemistry I Lab for Majors/Recitation (CHE1112) General Chemistry II Lab for Majors/Recitation (CHE1122) 4 General Chemistry II Lab for Majors/Recitation (CHE1122) 4 Foreign Language (FL201) 4 African Diaspora/World II (ADW111) 4 African Diaspora/World II (ADW112) 4 African Diaspora/World II (ADW112) 4 African Diaspora/World II (ADW112) 4 First Year Experience (FYE 101) 6 Big Questions Colloquia (BQC100) 1 TOTAL HOURS Fall Semester Fall Semester Credits SopHOMORE YEAR Fall Semester Credits Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry II Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry II (ADW123) 4 Computer Science I – C++ (CIS121) 4 Organic Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 Instrumental Analysis (CHE346) 3 Physical Chemistry II (Lab (CHE346L) 1 Instrumental Analysis (CHE346L) 1 Organic Chemistry (CHE347L) 3 Biochemical Principles (CHE 410) 3 Applycial Chemistry Lab (CHE347L) 3 Elective 4 Divisional Requir		FIRST	Γ YEAR	
General Chemistry I Lab for Majors/Recitation (CHE111L) General Chemistry II Lab for Majors/Recitation (CHE112L) 4	Fall Semester	Credits	Spring Semester	Credits
C(HE11L)	General Chemistry I for Majors (CHE111)	3	General Chemistry II for Majors (CHE112)	3
First Year Composition (ENG103) 4 Foreign Language (FL201) 4 African Diaspora/World II (ADW112) 1 First Year Experience (FYE102) 1 Tirst Year Experience (FYE102) 1 Tirst Year Seminar in Chemistry (CHE101) 0 Big Questions Colloquia (BQC100) 1 TOTAL HOURS 18 SOPHOMORE YEAR Fall Semester Credits Spring Semester Credits Organic Chemistry I I for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry II Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Physics II: Bec/Mag & Lab (PHY121) 4 Computer Science I – C++ (CIS121) ³ 4 Wellness & Health 1 ToTAL HOURS 18 TOTAL HOURS 15 TOTAL HOURS 16 Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 1 Instrumental Analysis (CHE360) 1 Instrumental Analysis (CHE360) 1 Instrumental Analysis (CHE360) 1 Instrumental Requirement 1 4 Wellness & Health 1 Instrumental Requirement 2 4 Wellness & Health 1 Instrumental Requirement 1 4 Wellness & Health 1 Instrumental Requirement 2 4 Wellness & Health 1 Instrumental Requirement 3 4 Wellness & Health 1 Instrume	General Chemistry I Lab for Majors/Recitation (CHE111L)	1	,	1
African Diaspora/World I (ADW111) 4 African Diaspora/World II (ADW112) 4 First Year Experience (FYE 101) 1 First Year Experience (FYE102) 1 First Year Experience (FYE 101) 0 Big Questions Colloquia (BQC100) 1 FOTAL HOURS 16-17 TOTAL HOURS 18 SOPHOMORE YEAR Fall Semester Credits Spring Semester Credits Organic Chemistry I I for Majors (CHE231) 4 Organic Chemistry I I Lab/Recitation (CHE234L) 1 Organic Chemistry I Lab/Recitation (CHE234L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry (SYE104) 1 Sophomore Seminar-Chemistry (CHE345) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II Lab (CHE346L) 1 Instrumental Analysis (CHE301L) 1 Instrumental	Pre-Calculus (MAT116 or MAT120)	3-4	Calculus I (MAT231)	4
First Year Experience (FYE 101) 1 First Year Experience (FYE102) 1 1 First Year Seminar in Chemistry (CHE101) 0 Big Questions Colloquia (BQC100) 1 1 FOTAL HOURS 16-17 TOTAL HOURS 18 SOPHOMORE YEAR Fall Semester Credits Spring Semester Credits Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry (SYE104) 1 Organic Chemistry II (CHE345) 3 Organic Chemistry II (CHE345) 3 Organic Chemistry II Lab (CHE346L) 1 Organic Chemistry (CHE301L) 1 Organic Chemistry II Lab (CHE346L) 1 Organic Chemistry Lab (CHE301L) 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry (SYE104) 1 Organic Chemistry (SYE1	First Year Composition (ENG103)	4	Foreign Language (FL201)	4
First Year Seminar in Chemistry (CHE101) 16-17 TOTAL HOURS 18 SOPHOMORE YEAR Fall Semester Credits Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 Sophomore Seminar-Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346L) 1 Instrumental Analysis (CHE346L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 2 4 Wellness & Health 1 Protal Hours 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits Spring Semester Credits Spring Semester Credits Organic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 4 Wellness & Health 1 Undergraduate Research (CHE431) 1 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) 1 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431)	African Diaspora/World I (ADW111)	4	African Diaspora/World II (ADW112)	4
Fall Semester Credits Spring Semester Credits (CHE231) 4 Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry II (MAT 232) 4 Computer Science I - C++ (CIS121) ² 4 Organic Chemistry (CHE321) 1 Organic Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 Organic Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 Organic Chemistry II (CHE345) 15 Organic Chemistry II (CHE345) 3 Physical Chemistry II (CHE346) 3 Organic Chemistry II (CHE345) 3 Physical Chemistry II (CHE346) 3 Organic Chemistry II Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry II Chemistr	First Year Experience (FYE 101)	1	First Year Experience (FYE102)	1
Fall Semester Credits Spring Semester Credits Organic Chemistry I for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry I Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry I Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic St. Mechanics & Lab (PHY151) 4 Physics II: Elec/Mag & Lab (PHY241) 4 Calculus II (MAT 232) 4 Computer Science I – C++ (CIS121) ² 4 Ororeign Language (FL202) 4 Wellness & Health 1 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 FOTAL HOURS 18 TOTAL HOURS 15 JUNIOR YEAR Credits Spring Semester Credits Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II (Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Differential Equations (MAT365) ¹ 4 Divisional Requirement 2 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 Fall Semester Credits Spring Semester Credits Inorganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 Inorganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Undergraduate Research (CHE431) ³ 1-3	First Year Seminar in Chemistry (CHE101)	0	Big Questions Colloquia (BQC100)	1
Fall Semester Credits Spring Semester Credits Organic Chemistry I for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry I Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 4 Computer Science I – C++ (CIS121) ² 4 Computer Science I – C++ (CIS121) ² 4 Wellness & Health 1 Sophomore Seminar-Chemistry (SYE104) 1 Sophomore Seminar-Chemistry (ICHE345) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 2 A Divisional Requirement 2 A Divisional Requirement 2 A Divisional Requirement 1 Protal Hours 13 SENIOR YEAR Fall Semester Credits Spring Semester Credits Organic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 Norganic Chemistry Lab (CHE421L) 1 Elective 4 Divisional Requirement 3 A Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	TOTAL HOURS	16-17	TOTAL HOURS	18
Organic Chemistry I for Majors (CHE231) 4 Organic Chemistry II for Majors (CHE232) 4 Organic Chemistry I Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Organic Chemistry II (CHS121) 1 Organic Chemistry (SYE103) 1 Organic Chemistry II (CHE312) 1 Organic Chemistry II (CHE345) 3 Physical Chemistry II (CHE346) 3 Organic Chemistry II Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry II (CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry II (CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry II (CHE301L) 1 Organic Chemistry II CHE301L) 1 Instrumental Analysis (CHE496) 4 Organic Chemistry II (CHE301L) 1 Organic Chemistry II (CHE301L) 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry II CHE301L) 1 Organic Chemistry II CHE301L 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry II Lab (CHE301L) 1 Organic Chemistry II CHE301L 1 Organic Chemistry II Ch		SOPHOM	ORE YEAR	
Organic Chemistry I Lab/Recitation (CHE233L) 1 Organic Chemistry II Lab/Recitation (CHE234L) 1 Physics I: Mechanics & Lab (PHY151) 4 Physics II: Elec/Mag & Lab (PHY241) 4 Calculus II (MAT 232) 4 Computer Science I – C++ (CIS121) ² 4 Wellness & Health 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 TOTAL HOURS 18 TOTAL HOURS 19 Physical Chemistry (I (CHE345) 2 Physical Chemistry II (CHE345) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (CHE346) 3 Physical Chemistry II (Lab (CHE346L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 1 4 Wellness & Health 1 Divisional Requirement 1 4 Wellness & Health 1 TOTAL HOURS 13 SENIOR YEAR Credits Fall Semester Credits Fall Semester Credits Spring Semester Credits TOTAL HOURS 13 Biochemical Principles (CHE 410) 3 Biochemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 Physical Chemistry Lab (CHE421L) 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1 1-3	Fall Semester	Credits	Spring Semester	Credits
Physics I: Mechanics & Lab (PHY151) 4 Physics II: Elec/Mag & Lab (PHY241) 4 Calculus II (MAT 232) 4 Computer Science I – C++ (CIS121) ² 4 Foreign Language (FL202) 4 Wellness & Health 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 FOTAL HOURS 18 TOTAL HOURS 15 Fall Semester Credits Spring Semester Credits Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry C(HE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits Spring Semester Credits Fall Semester Credits Spring Semester Credits Forotal Hours 13 SENIOR YEAR Fall Semester Credits Spring Semester Credits Forotal Hours 13 SENIOR YEAR Forotal Hours 14 Forotal Hours 15 Forotal Hours 15 Forotal Hours 15 Forotal Hours 15 Forotal Hours 16 Fall Semester Credits Spring Semester Credits Forotal Hours 17 Forotal Hours 19 Forotal Hours 20 Forotal Hours 19 Forotal Hours 20 Forota	Organic Chemistry I for Majors (CHE231)	4	Organic Chemistry II for Majors (CHE232)	4
Calculus II (MAT 232) 4 Computer Science I – C++ (CIS121) ² 4 Foreign Language (FL202) 4 Wellness & Health 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 FOTAL HOURS 18 TOTAL HOURS 15 TOTAL HOURS 18 TOTAL HOURS 15 Fall Semester Credits Spring Semester Credits Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits Spring Semester Credits Foreign Semester Credits Spring Semester Credits Onorganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 Senior Semistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Organic Chemistry I Lab/Recitation (CHE233L)	1	Organic Chemistry II Lab/Recitation (CHE234L)	1
Foreign Language (FL202) 4 Wellness & Health 1 Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 FOTAL HOURS 18 TOTAL HOURS 15 JUNIOR YEAR Fall Semester Credits Spring Semester Credits Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Credits Spring Semester Credits Fall Semester Credits Spring Semester Credit norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Jundergraduate Research (CHE431) ³ 1-3	Physics I: Mechanics & Lab (PHY151)	4	Physics II: Elec/Mag & Lab (PHY241)	4
Sophomore Seminar-Chemistry (SYE103) 1 Sophomore Seminar-Chemistry (SYE104) 1 FOTAL HOURS 18 TOTAL HOURS 15 JUNIOR YEAR Fall Semester Credits Spring Semester Credit Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Differential Equations (MAT365)¹ 4 Divisional Requirement 2 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Credits Spring Semester Credit norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Jundergraduate Research (CHE431)³ 1-3	Calculus II (MAT 232)	4	Computer Science I – C++ (CIS121) ²	4
TOTAL HOURS 18 TOTAL HOURS JUNIOR YEAR Fall Semester Credits Spring Semester Credit Physical Chemistry I (CHE345) Analytical Chemistry (CHE301) Analytical Chemistry Lab (CHE301) Analytical Chemistry Lab (CHE301L) Instrumental Analysis (CHE496) 4 Divisional Requirement 2 4 Divisional Requirement 1 4 Wellness & Health Instrumental Analysis (CHE496) 4 Divisional Requirement 2 4 Divisional Requirement 3 5 SENIOR YEAR Credits Spring Semester Credits Inorganic Chemistry (CHE421) Inorganic Chemistry (CHE421) Inorganic Chemistry Lab (CHE421L) Inorganic Chemistry CHE429) Inorganic Chemistry CHE429) Inorganic Chemistry Elective Inorganic Chemistry CHE421) Inorganic Chemistry CHE4210 Inorganic CHE4210 Inorganic CHE4210 Inorganic CHE4210 Inorganic CHE4210 Inorganic CHE42	Foreign Language (FL202)	4	Wellness & Health	1
Fall Semester Credits Spring Semester Credit Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Differential Equations (MAT365) ¹ 4 Divisional Requirement 2 4 Divisional Requirement 1 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Credits Spring Semester Credits norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Sophomore Seminar-Chemistry (SYE103)	1	Sophomore Seminar-Chemistry (SYE104)	1
Fall Semester Credits Spring Semester Credits Physical Chemistry I (CHE345) 3 Physical Chemistry II (CHE346) 3 Analytical Chemistry (CHE301) 3 Physical Chemistry II Lab (CHE346L) 1 Analytical Chemistry Lab (CHE301L) 1 Instrumental Analysis (CHE496) 4 Differential Equations (MAT365)¹ 4 Divisional Requirement 2 4 Divisional Requirement 1 4 Wellness & Health 1 TOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits Spring Semester Credit norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431)³ 1-3	TOTAL HOURS	18	TOTAL HOURS	15
Physical Chemistry I (CHE345) Analytical Chemistry I (CHE346) Analytical Chemistry (CHE301) Analytical Chemistry Lab (CHE301) Analytical Chemistry Lab (CHE301L) Analytical Chemistry Lab (CHE301L) Analytical Chemistry Lab (CHE301L) Analytical Chemistry Lab (CHE301L) Instrumental Analysis (CHE496) 4 Divisional Requirement 2 4 Wellness & Health I TOTAL HOURS I3 SENIOR YEAR Credits Spring Semester Credit norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) I Elective A Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Undergraduate Research (CHE431) ³ I-3		JUNIO	R YEAR	
Analytical Chemistry (CHE301) Analytical Chemistry Lab (CHE301L) Analytical Chemistry Lab (CHE301L) Analytical Chemistry Lab (CHE301L) Differential Equations (MAT365) ¹ 4 Divisional Requirement 2 4 Wellness & Health TOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Credits Norganic Chemistry (CHE421) Norganic Chemistry Lab (CHE421L) Nomen's or International Studies Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1 1-3	Fall Semester	Credits		Credits
Analytical Chemistry Lab (CHE301L) Differential Equations (MAT365) ¹ Divisional Requirement 2 Wellness & Health TOTAL HOURS 15 TOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits norganic Chemistry (CHE421) norganic Chemistry Lab (CHE421L) Women's or International Studies Chemistry Elective Undergraduate Research (CHE431) ³ 11 Instrumental Analysis (CHE496) 4 Divisional Requirement 2 4 Divisional Requirement 2 4 Divisional Requirement 3 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Physical Chemistry I (CHE345)	3		3
Differential Equations (MAT365) ¹ 4 Divisional Requirement 2 4 Wellness & Health 1 FOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits Spring Semester Credit norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 4 Divisional Requirement 3 4 Divisional Requirement 3 4 Chemistry Elective 4 Divisional Requirement 3 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Analytical Chemistry (CHE301)	3	Physical Chemistry II Lab (CHE346L)	1
TOTAL HOURS 15 TOTAL HOURS 13 SENIOR YEAR Fall Semester Credits norganic Chemistry (CHE421) norganic Chemistry Lab (CHE421L) Nomen's or International Studies Chemistry Elective Undergraduate Research (CHE431) ³ TOTAL HOURS 13 TOTAL HOURS 13 SENIOR YEAR Credits Spring Semester Credit Spring Semester Credit Divisional Principles (CHE 410) 3 Elective 4 Divisional Requirement 3 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Analytical Chemistry Lab (CHE301L)	1	Instrumental Analysis (CHE496)	4
SENIOR YEAR Fall Semester Credits norganic Chemistry (CHE421) norganic Chemistry Lab (CHE421L) Nomen's or International Studies Chemistry Elective Judergraduate Research (CHE431) ³ 15 TOTAL HOURS 13 SENIOR YEAR Credits Spring Semester Credit Biochemical Principles (CHE 410) 3 Elective 4 Divisional Requirement 3 4 Senior Seminar in Chemistry (CHE429) 1 Judergraduate Research (CHE431) ³ 1-3	Differential Equations (MAT365) ¹	4	Divisional Requirement 2	4
Fall Semester Credits Spring Semester Credits norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3	Divisional Requirement 1	4	Wellness & Health	1
Fall Semester Credits Spring Semester Credits norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 norganic Chemistry Lab (CHE421L) 1 Elective 4 Women's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3				
Fall SemesterCreditsSpring SemesterCreditnorganic Chemistry (CHE421)3Biochemical Principles (CHE 410)3norganic Chemistry Lab (CHE421L)1Elective4Women's or International Studies4Divisional Requirement 34Chemistry Elective4Senior Seminar in Chemistry (CHE429)1Undergraduate Research (CHE431)31-3	TOTAL HOURS	15	TOTAL HOURS	13
norganic Chemistry (CHE421) 3 Biochemical Principles (CHE 410) 3 Inorganic Chemistry Lab (CHE421L) 4 Vomen's or International Studies 4 Divisional Requirement 3 4 Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 5 Indergraduate Research (CHE431) ³ 1-3		SENIO	R YEAR	
norganic Chemistry Lab (CHE421L) Nomen's or International Studies 4 Divisional Requirement 3 4 Senior Seminar in Chemistry (CHE429) 1 Indergraduate Research (CHE431) ³ 1-3		Credits		Credits
Women's or International Studies 4 Divisional Requirement 3 5 Senior Seminar in Chemistry (CHE429) 1 Jundergraduate Research (CHE431) ³ 1-3		3		3
Chemistry Elective 4 Senior Seminar in Chemistry (CHE429) 1 Undergraduate Research (CHE431) ³ 1-3		1		4
Undergraduate Research (CHE431) ³ 1-3		4		4
	Chemistry Elective	4	Senior Seminar in Chemistry (CHE429)	1
TOTAL HOURS 13-15 TOTAL HOURS 12	Undergraduate Research (CHE431) ³	1-3		
	TOTAL HOURS	13-15	TOTAL HOURS	12

¹ Course strongly recommended

² Other CIS options CIS 111, 115

³ Course strongly recommended REVIEWED SUMMER 2019

CHEMISTRY MAJOR-ACS Certification

This option is approved by the American Chemical Society (ACS) and recommended for those students seeking entry into graduate school in Chemistry and related fields. Ten (10) lecture courses and seven (7) laboratory courses in the content area (chemistry and/or biochemistry) are required for graduation. However, this option requires an additional advanced chemistry elective to be taken beyond the 10 lecture courses required for graduation.

FIRST YEAR					
Fall Semester	Credits	Spring Semester	Credits		
General Chemistry I for Majors (CHE111)	3	General Chemistry II for Majors (CHE112)	3		
General Chemistry I Lab for Majors/Recitation (CHE111L)	1	General Chemistry II Lab for Majors/Recitation (CHE112L)	1		
Pre-Calculus (MAT116 or MAT120)	3-4	Calculus I (MAT231)	4		
First Year Composition (ENG103)	4	Foreign Language (FL201)	4		
African Diaspora/World I (ADW111)	4	African Diaspora/World II (ADW112)	4		
First Year Experience (FYE 101)	1	First Year Experience (FYE102)	1		
First Year Seminar in Chemistry (CHE101)	0	Big Questions Colloquia (BQC100)	1		
TOTAL HOURS	16-17	TOTAL HOURS	18		
	SOPHOM	IORE YEAR			
Fall Semester	Credits	Spring Semester	Credits		
Organic Chemistry I for Majors (CHE231)	4	Organic Chemistry II for Majors (CHE232)	4		
Organic Chemistry I Lab/Recitation (CHE233L)	1	Organic Chemistry II Lab/Recitation (CHE234L)	1		
Physics I: Mechanics & Lab (PHY151)	4	Physics II: Elec/Mag & Lab (PHY241)	4		
Calculus II (MAT 232)	4	Computer Science I – C++ (CIS121) ²	4		
Foreign Language (FL202)	4	Wellness & Health	0-1		
Sophomore Seminar-Chemistry (SYE103)	1	Sophomore Seminar-Chemistry (SYE104)	1		
TOTAL HOURS	18	TOTAL HOURS	14-15		
	JUNIO	PR YEAR			
Fall Semester	Credits	Spring Semester	Credits		
Physical Chemistry I (CHE345)	3	Physical Chemistry II (CHE346)	3		
Analytical Chemistry (CHE301)	3	Physical Chemistry II Lab (CHE346L)	1		
Analytical Chemistry Lab (CHE301L)	1	Instrumental Analysis (CHE496)	4		
Differential Equations (MAT365) ¹	4	Elective	3-4		
Divisional Requirement 1	4	Divisional Requirement 2	4		
Wellness & Health	0-1				
TOTAL HOURS	15-16	TOTAL HOURS	15-16		
	SENIO	R YEAR			
Fall Semester	Credits	Spring Semester	Credits		
Inorganic Chemistry (CHE421)	3	Biochemical Principles (CHE 410)	3		
Inorganic Chemistry Lab (CHE421L)	1	Adv. Chem. Elective	3-4		
Undergraduate Research (CHE431)	3	Divisional Requirement 3	4		
Women's or International Studies	4	Undergraduate Research (CHE432)	3		
Elective	3-4	Senior Seminar in Chemistry (CHE429)	1		
TOTAL HOURS	14-15	TOTAL HOURS	14-15		

¹ Course strongly recommended

² Other CIS options CIS 111, 115

CHEMISTRY DUAL DEGREE MAJOR

This option is recommended for those desiring to transition into a partner institution to complete a degree in Chemical Engineering. Ten (10) lecture courses and seven (7) laboratory courses in the content area (chemistry and/or biochemistry) are required for graduation. Eight (8) of the required ten (10) Chemistry content courses are listed in this sequence; the remaining two required Chemistry courses will be taken at the engineering institution upon approval.

FIRST YEAR				
Fall Semester	Credits	Spring Semester	Credits	
General Chemistry I for Majors (CHE111)	3	General Chemistry II for Majors (CHE112)	3	
General Chemistry I Lab for Majors/Recitation (CHE111L)	1	General Chemistry II Lab for Majors/Recitation (CHE112L)	1	
Calculus I (MAT231)	4	Calculus II (MAT232)	4	
First Year Composition (ENG103)	4	Engineering Graphics (ERG102)	3	
African Diaspora/World I (ADW111)	4	African Diaspora/World II (ADW112)	4	
Introduction to Engineering (ERG101)	2	Foreign Language (FL201)	4	
First Year Seminar in Chemistry (CHE101)	0	First Year Experience (FYE102)	1	
First Year Experience (FYE101) TOTAL HOURS	1 19	Big Question Colloquia (BQC100) TOTAL HOURS	1 21	
CODUOMODE VEAD				

SOPHOWORE YEAR			
Fall Semester	Credits	Spring Semester	Credits
Organic Chemistry I for Majors (CHE231)	4	Organic Chemistry II for Majors (CHE232)	4
Organic Chemistry I Lab/Recitation(CHE233L)	1	Organic Chemistry II Lab/Recitation (CHE234L)	1
Physics I: Mechanics & Lab (PHY151)	4	Physics II: Elec/Mag & Lab (PHY241)	4
Computer Science I – C++ (CIS121) ³	4	Calculus III (MAT324)	4
Foreign Language (FL202)	4	Divisional Requirement 1 (Humanities)	4
Wellness & Health	0-1	Wellness & Health	0-1
Sophomore Seminar: Chemistry (SYE103)	1	Sophomore Seminar: Chemistry (SYE104)	1
TOTAL HOURS	18-19	TOTAL HOURS	18-19

JUNIOR YEAR			
Fall Semester	Credits	Spring Semester	Credits
Physical Chemistry I (CHE345)	3	Physical Chemistry II (CHE346)	3
Inorganic Chemistry (CHE421)	3	Physical Chemistry II Lab (CHE346L)	1
Inorganic Chemistry Lab (CHE421L)	1	Instrumental Analysis (CHE496)	4
Physics III: Optics & Lab (PHY 242) ¹	4	Linear Algebra (MAT214)	4
Differential Equations (MAT365)	4	Divisional Requirement 3 ²	4
Divisional Requirement 2 (Fine Arts)	4	Women's/International Studies	4
TOTAL HOURS	19	TOTAL HOURS	20

Senior Year

Eight (8) of the required ten (10) Chemistry content courses are listed in this sequence; the remaining two required Chemistry courses will be taken at the engineering institution upon approval.

¹ If attending Georgia Tech, Physics III is not required

² Must be a course in American History and either Microeconomics or Macroeconomics

³ Other CIS options include CIS 111, 115

CHEMISTRY MAJOR –Teaching Certification in Secondary Education

FIRST YEAR						
Fall Semester	Credits	Spring Semester	Credits			
General Chemistry I for Majors (CHE111)	3	General Chemistry II for Majors (CHE112)	3			
General Chemistry I Lab for	1	General Chemistry II Lab for	1			
Majors/Recitation (CHE111L)		Majors/Recitation (CHE112L)				
First Year Seminar in Chemistry (CHE101)	0	Calculus I (MAT231)	4			
Pre-Calculus (MAT116 or MAT120)	3-4	Discovering Comp. Sci. (CIS111)	4			
First Year Composition (ENG103)	4	African Diaspora/World II (ADW112)	4			
African Diaspora/World I (ADW111)	4	First Year Experience (FYE102)	1			
First Year Experience (FYE101)	1	Big Question Colloquia (BQC100)	1			
Wellness and Health	0-1					
TOTAL HOURS	16-18	TOTAL HOURS	18			
	S	UMMER				
Foreign Language, Math (if not finished with	Calculus I)					
	SOPHO	OMORE YEAR				
Fall Semester	Credits	Spring Semester	Credits			
Organic Chemistry I for Majors (CHE231)	4	Organic Chemistry I for Majors (CHE232)	4			
Organic Chemistry I Lab Majors/Recitation (CHE233L)	1	Organic Chemistry II Lab Majors/Recitation (CHE234L)	1			
Calculus II (MAT332)	4	Physics I: Mechanics & Lab (PHY151)	4			
Sophomore Year Experience (SYE103)	1	Sophomore Year Experience (SYE104)	1			
Orientation in Education (EDU206)	4	Divisional Requirement 1	4			
Educational Psychology (EDU204)	4	Adolescent Psychology [Soc Sci Div. Req.] (PSY304)	4			
TOTAL HOURS	18	TOTAL HOURS	18			
	JUN	IIOR YEAR				
Fall Semester	Credits	Spring Semester	Credits			
Physical Chemistry (CHE345)	3	Biochemical Principles (CHE410)	4			
Intro to Environmental Science (ES211)	4	Divisional Requirement 3/Women's or				
Physics II: Elec/Mag & Lab (PHY241)	4	International Studies	4			
Wellness and Health	0-1	Curriculum & Methods for Secondary	4			
Divisional Requirement 2	4	Exceptional Children (EDU316)	4			
TOTAL HOURS	15-16	TOTAL HOURS	16			
	SEN	IIOR YEAR				
Fall Semester	Credits	Spring Semester	Credits			
Analytical Chemistry Lecture (CHE301)	3	Student Teaching (EDU458)	12			
Analytical Lab Elective (CHE301L)	1	Seminar II (EDU452)	2			
Senior Seminar in Chemistry (CHE429)	1					
Inorganic Chemistry Lecture (CHE421)	3					
Inorganic Chemistry Lab (CHE421)	1					
Chemistry Elective w/Lab	4					
Seminar I for Student Teaching (EDU451)	3					
TOTAL HOURS	16	TOTAL HOURS	14			
