

American International College
School of Business, Arts and Sciences
Program Plan

MAJOR: Biochemistry
Catalog Year: 2017-2018

FRESHMAN	COURSES	CREDITS	TOTAL
FALL	AIC1140, The Undergraduate Experience (or AIC1100 or HON1104, 3 Cr)	1	13
	ENG1201, English Composition	3	
	MAT1840, College Algebra and Trigonometry	4	
	CHE1600, General Chemistry I (includes CHE1602, Review)	4	
	CHE1601, General Chemistry I Lab	1	
SPRING	ENG1202, Analytical Writing	3	15
	MAT2400, Calculus I	4	
	CHE1700, General Chemistry II (includes CHE1702, Review)	4	
	CHE1701, General Chemistry II Lab	1	
	Gen Ed course (Soc Aw or Cult Aw)***	3	
SOPHOMORE			
FALL	MAT2500, Calculus II with lab (MAT2501)	4	13
	CHE2400, Organic Chemistry I	3	
	CHE2401, Organic Chemistry I Lab	1	
	PHY3400, General Physics I (includes PHY3402, Review) #	4	
	PHY3401, General Physics I Lab#	1	
SPRING	CHE2500, Organic Chemistry II	3	13
	CHE2501, Organic Chemistry II Lab	1	
	CHE2200, Introduction to the Scientific Literature	1	
	PHY1600, General Physics II (includes PHY1602, Review) #	4	
	PHY1601, General Physics II Lab#	1	
	Gen Ed course (Soc Aw or Cult Aw)***	3	
JUNIOR			
FALL	CHE2600, Analytical Chemistry with lab#	4	15
	CHE4200, Biochemistry I with lab### (CHE4201)	4	
	BIO1400, Biology I with lab (BIO1401)	4	
	MAT2004, Biostatistics	3	
SPRING	BIO3XXX, 3000-level Biology course w lab, selected with advisor	4	17
	CHE4300, Biochemistry II with lab### (CHE4301)	4	
	Gen Ed course (Soc Aw, Cult Aw, or Literature) ***	3	
	Gen Ed course (Soc Aw, Cult Aw, or Literature) ***	3	
	COM2200, Information and Technology	3	
SENIOR			
FALL	CHE3400, Physical Chemistry I###	3	17
	CHE3401, Physical Chemistry I Lab##	1	
	CHE4840, Senior Seminar in Chemistry, with lab (CHE4841)	4	
	Gen Ed course (Soc Aw, Cult Aw, or Literature) ***	3	
	Gen Ed course (Soc Aw, Cult Aw, or Literature) ***	3	
	Elective	3	
SPRING	CHE3500, Physical Chemistry II###	3	17
	CHE3501, Physical Chemistry II Lab##	1	
	CHE3XXX, Chemistry elective with lab	4	
	Gen Ed course (Soc Aw, Cult Aw, or Literature) ***	3	
	Elective or CHE4900, Chemistry Research	3	
	Elective	3	
		TOTAL CREDITS:	120

Notes:

*A student will incur additional tuition charges in any semester in excess of 17 credits.

**A student must apply to the Dean for permission to take more than 18 credits in any given semester.

*** General Education courses must be selected to satisfy the General Education requirements in Social Awareness, Cultural Awareness and Literature.

These courses may be swapped according to year in which CHE2600 offered (usually scheduled in "odd" fall semesters).

These courses may be swapped according to year in which CHE3400/3500 offered (usually scheduled in "odd" fall/"even" spring semesters).

Major Requirements

_____	CHE1600	General Chemistry I, with review CHE1602 and lab CHE1601 (4 cr)
_____	CHE1700	General Chemistry II, with review CHE1702 and lab CHE1701 (4 cr)
_____	CHE2200	Introduction to the Scientific Literature (1 cr)
_____	CHE2400	Organic Chemistry I, with lab CHE2401 (4 cr)
_____	CHE2500	Organic Chemistry II, with lab CHE2501 (4 cr)
_____	CHE2600	Analytical Chemistry, with lab CHE2601 (4 cr)
_____	CHE3400	Physical Chemistry I, with lab CHE3401 (4 cr)
_____	CHE3500	Physical Chemistry II, with lab CHE3501 (4 cr)
_____	CHE4200	Biochemistry I, with lab CHE4201 (4 cr)
_____	CHE4300	Biochemistry II, with lab CHE4301 (4 cr)
_____	CHE4840	Senior Seminar
_____	MAT2400	Calculus I
_____	MAT2500	Calculus II
_____	MAT2004	Biostatistics
_____	PHY1600	General Physics I, with review PHY1602 and lab PHY1601 (4 cr)
_____	PHY1800	General Physics II, with review CHE1802 and lab PHY1801 (4 cr)

_____ CREDITS

Additionally, any two of the following courses:

_____	BIO1400	Biology I with lab, BIO1401 (4 cr)
_____	BIO3450	Genetics with lab, BIO3451 (4 cr)
_____	BIO4030	Molecular Biology with lab, BIO4031 (4 cr)

_____ CREDITS

Plus four credit hours from the following, including one credit of laboratory:

_____	CHE3600	Advanced Inorganic Chemistry
_____	CHE3601	Advanced Inorganic Lab (1 cr)
_____	CHE3650	Spectroscopy of Organic Compounds
_____	CHE3651	Advanced Organic Lab Techniques (1 cr)
_____	CHE4050	Instrumental Analysis, with lab, CHE4051 (4 cr)
_____	CHE4600	Physical Biochemistry, with lab CHE4601 (4 cr)

_____ CREDITS

Plus, the following General Education courses (each line represents one course from the list, except Info & Tech Lit, as noted):

_____ Orientation: AIC1100, AIC1140 (1 cr), or HON1104

_____ Communication skills – Composition: ENG1201 or ENG1601

_____ Communication skills – Composition: ENG1202 or ENG1602

_____ Communication skills – Literature: ENG2410, 2420, 2430, 2500, 2510, 2520, 3200, 3210, 3280, 3290, 3380, 3400, 3410, 3430, 3440, 3450, 3480, 3490, 3800

REQ _____ Quantitative Reasoning: MAT1310, 1430, 2004, 2030; PSY2302 (CRJ2302)

_____ Information and Technological Literacy: COM2200 or, for Business majors, MIS1220 AND BUS1407

REQ _____ Scientific Awareness (course with lab, 4 cr): Any BIO1000-level course with lab; CHE1100, 1110, 1600, 1700; PHY1010, 1020, 1030, 1050, 1600, 1800

REQ _____ Scientific Awareness (course with lab, 4 cr): Any BIO1000-level course with lab; CHE1100, 1110, 1600, 1700; PHY1010, 1020, 1030, 1050, 1600, 1800

_____ Cultural Awareness: AMS1100, ART1000, 1010, 1030, 1100, 1120; COM2460, 3290; HON2210; IBS1420; MUS: any course; PHI1000, 1200, 1400, 2010, 2030; THR1400; VDA2640; Any elementary or intermediate foreign language, including sign language

_____ Cultural Awareness: AMS1100, ART1000, 1010, 1030, 1100, 1120; COM2460, 3290; HON2210; IBS1420; MUS: any course; PHI1000, 1200, 1400, 2010, 2030; THR1400; VDA2640; Any elementary or intermediate foreign language, including sign language

_____ Social Awareness: ECO1000, 1010, 1401, 1402; HON2220; HRD2000; HST1400, 1410, 1420, 1430, 1500, 1510, 1520, 2440; POL1000, 1400, 1500; PSY1401, 1501; SOC1010, 1100, 1400

_____ Social Awareness: ECO1000, 1010, 1401, 1402; HON2220; HRD2000; HST1400, 1410, 1420, 1430, 1500, 1510, 1520, 2440; POL1000, 1400, 1500; PSY1401, 1501; SOC1010, 1100, 1400

_____ Social Awareness: ECO1000, 1010, 1401, 1402; HON2220; HRD2000; HST1400, 1410, 1420, 1430, 1500, 1510, 1520, 2440; POL1000, 1400, 1500; PSY1401, 1501; SOC1010, 1100, 1400

_____ Social Awareness: ECO1000, 1010, 1401, 1402; HON2220; HRD2000; HST1400, 1410, 1420, 1430, 1500, 1510, 1520, 2440; POL1000, 1400, 1500; PSY1401, 1501; SOC1010, 1100, 1400

When counting credits, do not include those for courses included in the major requirements.

_____ **CREDITS**

Plus, enough elective courses to reach a minimum of 120 total credits.

_____ Course: _____

_____ **TOTAL CREDITS**
(120 min req for graduation)