

Name:

SID:

## GENERAL EDUCATION REQUIREMENTS

## English Composition

ENGL 101 or 107 3

ENGL 102 or 108 3

Or

ENGL 109H 3

## Second Language

2<sup>nd</sup> Semester Proficiency or higher 4-5

## Introduction to General Education

UNIV 101 1

## Exploring Perspectives

Artist 3

Humanist 3

Natural Scientist (*fulfilled by CHEM 181 or PHYS 141*)

Social Scientist 3

## Building Connections

Course 1 3

Course 2 3

Course 3 3

## General Education Portfolio

UNIV 301 1

## FOUNDATIONAL MATH &amp; SCIENCE

## Mathematics

MATH 122A & B or MATH 125 – *Calculus I* 3-5MATH 129 – *Calculus 2* 3MATH 263 (*recommended*) or 3-4

CHEM 380 (F) or MATH 254 or MATH 223

## Biology

MCB 181R – *Intro Biology 1* 3MCB 181L – *Intro Biology Lab 1* 1ECOL 182R – *Intro Biology 2* 3ECOL 182L – *Intro Biology Lab 2* 1

## Physics

PHYS 140 or 141 or 161H – *Intro Mechanics* 4PHYS 240 or 241 or 261H – *Intro Electricity & Magnetism* 4

## General Chemistry

CHEM 181 – *General Chemistry 1* 4CHEM 182 – *General Chemistry 2* 4BIOCHEMISTRY MAJOR REQUIREMENTS (*C or higher required*)

## CBC Majors First-Year Colloquium

CHEM 195A (F) 1

## Organic Chemistry

CHEM 246 – *Principles of Organic Chemistry* 3CHEM 256L – *Synthesis Lab* 2

## Biochemistry Core

BIOC 296B – *Intro to Biochemistry Research* 1BIOC 462A (F) – *Biochemistry I* 4BIOC 462B (S) – *Biochemistry 2* 4BIOC 463A – *Biochemistry Lab Techniques* 4BIOC 498(H) – *Senior Capstone/Thesis* 3/3

## Physical Chemistry

CHEM 385 – *Principles of Physical Chemistry* 3Chemistry elective (*Choose one*)CHEM 227 – *Principles of Analytical Chemistry* 3CHEM 310 – *Principles of Inorganic Chemistry* 3CHEM 485 – *Advanced Physical Chemistry* 3CHEM 346 – *Advanced Organic Chemistry* 3Biochemistry Electives (*6 units minimum*)

See Page 2 for complete electives list

Course 1

Course 2

## GRADUATION REQUIREMENTS

## Graduation Requirements

Total Units: 120

Upper-Division Units: 42

Cumulative GPA: 2.000+

Major GPA 2.000+

Mid-Career Writing Assessment

Units in Residence @ UA: 30+

Upper-Division Units @ UA: 18+

**Biochemistry Electives** (6 units minimum)

BIOC 395B (MARC program only) – <i>Scientific Writing</i>	1	NSC 408 – <i>Nutritional Biology</i>	3
BIOS 376 (cannot also receive credit for MATH 263) – <i>Intro. to Biostats</i>	3	NSC 475 (S) – <i>Nutrigenomics for Dis. Prev. &amp; Inter.</i>	3
BME 486 (F) – <i>Biomaterial-Tissue Interactions</i>	3	NROS 307 (F) – <i>Cellular Neurophysiology</i>	3-4
CHEE 377 (F) – <i>Microbiology for Engineers</i>	3	NROS 310 (S) – <i>Molecular &amp; Cellular Biology of Neurons</i>	3-4
CHEM 325 (F) – <i>Analytical Chemistry</i>	2	NROS 430 (S) – <i>Neurogenetics</i>	3
CHEM 326 (F) – <i>Analytical Chemistry Lab</i>	2	PCOL 320 (F, S) – <i>Toxicology of Substances</i>	3
CHEM 405A (S) – <i>Basic Lab Safety</i>	1	PCOL 410 (S) – <i>Medicinal Chemistry</i>	5
CHEM 405B (S) – <i>Advanced Lab Safety</i>	1	PHCL 412 (F) – <i>Intro. To Pharmacology</i>	3
CHEM 405C (S) – <i>Chemical Hygiene &amp; Regulations</i>	1	PHCL 445 (S) – <i>Drugs of Abuse</i>	3
CHEM 450 (F) – <i>Synthetic &amp; Mechanistic Organic Chemistry</i>	3	PHYS 431 (S) – <i>Molecular Biophysics</i>	3
ECOL 320(H) (F, SS) – <i>Genetics</i>	4-5	PLP 320 (F) – <i>Microbiomes</i>	3
ECOL 326 (F, SS) – <i>Genomics</i>	3	PLP 329A (F) – <i>Microbial Diversity</i>	3
ECOL 346 – <i>Bioinformatics</i>	4	PLP 428R (S) – <i>Microbial Genetics</i>	3
ENVS 474 (F) – <i>Aquatic Plants &amp; the Environment</i>	4	PLS 312 (S) – <i>Animal &amp; Plant Genetics</i>	4
ENVS 477 (S) – <i>Principles of Ecotoxicology</i>	3	PLS 340 (F) – <i>Intro. To Biotechnology</i>	3
IMB 401 (S) – <i>Medicinal Microbiology &amp; Immunology</i>	4	PLS 359 (F) – <i>Plant Cell Structure &amp; Function</i>	3
MATH 363 (F, S) – <i>Intro. To Statistical Methods</i>	3	PLS 360 (S) – <i>Plant Growth &amp; Physiology</i>	3
MCB 304 (F) – <i>Molecular Genetics</i>	4-5	PLS 448A (F) – <i>Plant Biochemistry &amp; Metabolic Eng.</i>	3
MCB 325 (F) – <i>The Biology of Cancer</i>	3-4	PSIO 380 (F, S) – <i>Fundamentals of Human Physiology</i>	4
MCB 410 (F, SS) – <i>Cell Biology</i>	3-4	PSIO 404 (S) – <i>Advanced Topics in Cellular Physiology</i>	3
MCB 411 (F, SS) – <i>Molecular Biology</i>	3-4	PSIO 420 (F) – <i>Exercise &amp; Environmental Physiology</i>	3
MCB 416A (S) – <i>Bioinformatics &amp; Funct. Genomic Analysis</i>	3	PSIO 431 (F, S) – <i>Physiology of the Immune System</i>	3
MCB 425 (S) – <i>Cancer Discoveries</i>	3	PSIO 465 (S) – <i>Neurophysiology</i>	3
MCB 480 (F) – <i>Intro. To Systems Biology</i>	3	PSIO 484 (S) – <i>Cardiovascular Muscle Biology &amp; Disease</i>	3
MIC 328R (S, SS) – <i>Microbial Physiology</i>	3	PSY 413 (F, S) – <i>Drugs, Brain, and Behavior</i>	3
MIC 419 (F, SS) – <i>Immunology</i>	4		
MIC 452 (F) – <i>Antibiotics-A Biological Perspective</i>	3		

Course offerings per semester are subject to change; F, S, and SS are designated on the classes above. Please check the Schedule of Classes for the most updated course information. Students are responsible for completing any prerequisites or contacting the offering department if permission is required.

**Recommended Academic Plan** Additional MATH pre-requisite coursework may be required to start Math & Chemistry. Please consult CBC Advisor for an individualized academic plan.

**1<sup>st</sup> Semester**

CHEM 181 (F)	4
MATH 122A & 122B	5
CHEM 195A (F)	1
ENGL 101	3
UNIV 101	1
<b>Total Units</b>	<b>14</b>

**2<sup>nd</sup> Semester**

CHEM 182 (S)	4
MATH 129	3
ENGL 102	3
Gen Ed EP or BC	3
Gen Ed EP or BC	3
<b>Total Units</b>	<b>16</b>

**3<sup>rd</sup> Semester**

CHEM 246	3
CHEM 256L	2
MCB 181R/L	3/1
Math 263 or Calc 3	3
Gen Ed EP or BC	3
<b>Total Units</b>	<b>15</b>

**4<sup>th</sup> Semester**

BIOC 462A (S)	4
BIOC 463A	4
BIOC 296B	1
ECOL 182R/L	3/1
Gen Ed EP or BC	3
<b>Total Units</b>	<b>15</b>

**5<sup>th</sup> Semester**

BIOC 462B (F)	4
PHYS 140 or 141	4
2 <sup>nd</sup> Language	4
Gen Ed EP or BC	3
<b>Total Units</b>	<b>15</b>

**6<sup>th</sup> Semester**

Chem or Bioc elective	3
PHYS 240 or 241	4
2 <sup>nd</sup> Language	4
Gen Ed EP or BC	3
<b>Total Units</b>	<b>14</b>

**7<sup>th</sup> Semester**

CHEM 385 (F)	3
BIOC 498(H) (1 <sup>st</sup> )	3
Bioc Elective	3
<i>Units to full time</i>	<i>3</i>
<b>Total Units</b>	<b>12</b>

**8<sup>th</sup> Semester**

Chem or Bioc elective	3
BIOC 498(H) (2 <sup>nd</sup> )	3
UNIV 301	1
<i>Units to full time</i>	<i>5</i>
<b>Total Units</b>	<b>12</b>