



Name:

SID:

**GENERAL EDUCATION REQUIREMENTS****English Composition**

WRIT 101 or 107	3
WRIT 102 or 108	3

**Or**

WRIT 109H	3
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**Second Language**

4 <sup>th</sup> Semester Proficiency or higher	4-5
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**Introduction to General Education**

UNIV 101	1
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**Exploring Perspectives**

Artist	3
Humanist	3
Natural Scientist ( <i>fulfilled by CHEM 181 or PHYS 141</i> )	
Social Scientist	3

**Building Connections**

Course 1	3
Course 2	3

**Civic Institutions**

Civics Course	3
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**General Education Portfolio**

UNIV 301	1
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**FOUNDATIONAL MATH & SCIENCE****Mathematics**

MATH 122A & B or MATH 125 – <i>Calculus</i>	3-5
MATH 263 – <i>Biostatistics</i> ( <i>recommended</i> )	3
Or MATH 129 – <i>Calculus 2</i>	

**Biology**

MCB 181R – <i>Intro Biology 1</i>	3
MCB 181L – <i>Intro Biology Lab 1</i>	1
ECOL 182R – <i>Intro Biology 2</i>	3
ECOL 182L – <i>Intro Biology Lab 2</i>	1

**Physics**

PHYS 110 or 140 or 141 or 161H – <i>Intro Mechanics</i>	3-4
PHYS 111 or 240 or 241 or 261H – <i>Intro Electricity &amp; Magnetism</i>	3-4

**General Chemistry**

CHEM 181 – <i>General Chemistry 1</i>	4
CHEM 182 – <i>General Chemistry 2</i>	4

**BIOCHEMISTRY MAJOR REQUIREMENTS****CBC Majors First-Year Colloquium**

CHEM 195A (F)	1
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**Organic Chemistry**

CHEM 246 – <i>Principles of Organic Chemistry</i>	3
CHEM 256L – <i>Synthesis Lab</i>	2

**Biochemistry Core**

BIOC 296B – <i>Intro to Biochemistry Research</i>	1
BIOC 462A (F) – <i>Biochemistry I</i>	4
BIOC 462B (S) – <i>Biochemistry 2</i>	4
BIOC 463A – <i>Biochemistry Lab Techniques</i>	4

**Chemistry Elective (Choose one)**

CHEM 227 – <i>Principles of Analytical Chemistry</i>	3
CHEM 310 – <i>Principles of Inorganic Chemistry</i>	3
CHEM 385 – <i>Principles of Physical Chemistry</i>	3
CHEM 346 – <i>Advanced Organic Chemistry</i>	3

**Biochemistry Electives (6 units minimum)**

See Page 2 for complete electives list

Course 1
Course 2

**UNIVERSITY REQUIREMENTS****UA 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 427 – Bioethics and Research Ethics	3	NSC 408 – Nutritional Biology	3
BIOS 376 – Intro. to Biostats (cannot also receive credit for MATH 263)	3	NSC 475 (S) – Nutrigenomics for Dis. Prev. & Inter.	3
BME 486 – Biomaterial-Tissue Interactions	3	NROS 307 – Cellular Neurophysiology	3-4
CHEE 377 – Microbiology for Engineers	3	NROS 310 – Molecular & Cellular Biology of Neurons	3-4
CHEM 365 – Clinical Analysis	2	NROS 430 – Neurogenetics	3
CHEM 326 – Analytical Chemistry Lab	2	PCOL 320 – Toxicology of Substances	3
CHEM 405A – Basic Lab Safety	1	PCOL 410 – Medicinal Chemistry	5
CHEM 405B – Advanced Lab Safety	1	PHCL 412 – Intro. To Pharmacology	3
CHEM 405C – Chemical Hygiene & Regulations	1	PHCL 445 – Drugs of Abuse	3
CHEM 450 – Synthetic & Mechanistic Organic Chemistry	3	PHYS 431 – Molecular Biophysics	3
CHEM 485 – Advanced Physical Chemistry	3	PLP 320 – Microbiomes	3
ECOL 320(H) – Genetics	4-5	PLP 329A – Microbial Diversity	3
ECOL 326 – Genomics	3	PLP 428R – Microbial Genetics	3
ECOL 346 – Bioinformatics	4	PLS 312 – Animal & Plant Genetics	4
ENVS 474 – Aquatic Plants & the Environment	4	PLS 340 – Intro. To Biotechnology	3
ENVS 477 – Principles of Ecotoxicology	3	PLS 359 – Plant Cell Structure & Function	3
IMB 401 – Medicinal Microbiology & Immunology	4	PLS 360 – Plant Growth & Physiology	3
MATH 363 – Intro. To Statistical Methods	3	PLS 448A – Plant Biochemistry & Metabolic Engineering	3
MCB 304 – Molecular Genetics	4-5	PSIO 380 – Fundamentals of Human Physiology	4
MCB 325 – The Biology of Cancer	3-4	PSIO 404 – Advanced Topics in Cellular Physiology	3
MCB 410 – Cell Biology	3-4	PSIO 420 – Exercise & Environmental Physiology	3
MCB 411 – Molecular Biology	3-4	PSIO 431 – Physiology of the Immune System	3
MCB 416A – Bioinformatics & Funct. Genomic Analysis	3	PSIO 465 – Neurophysiology	3
MCB 425 – Cancer Discoveries	3	PSIO 484 – Cardiovascular Muscle Biology & Disease	3
MCB 480 – Intro. To Systems Biology	3	PSY 413 – Drugs, Brain, and Behavior	3
MIC 328R – Microbial Physiology	3	BIOC 362(H), 462(H) – Directed Research	1-3
MIC 419 – Immunology	4	BIOC 399(H), 499(H) – Independent Study	1-3
MIC 452 – Antibiotics-A Biological Perspective	3	BIOC 498(H) – Senior Capstone/Thesis	3

Course offerings per semester are subject to change; if students cannot find the elective they desire, they can email an inquiry to the offering department. Please check the Schedule of Classes for most updated course information. Students are responsible for completing any pre-requisites 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
WRIT 101	3
UNIV 101	1
<b>Total Units</b>	<b>14</b>

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

CHEM 182 (S)	4
MATH 263 or 129	3
WRIT 102	3
Gen Ed EP/BC/CI	3
Gen Ed EP/BC/CI	3
<b>Total Units</b>	<b>16</b>

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

CHEM 246	3
CHEM 256L	2
MCB 181R/L	3/1
BIOC 296B	2
2 <sup>nd</sup> Language	4-5
<b>Total Units</b>	<b>15-16</b>

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

BIOC 462A (S)	4
BIOC 463A	4
2 <sup>nd</sup> Language	4-5
Gen Ed EP/BC/CI	3
<b>Total Units</b>	<b>15-16</b>

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

BIOC 462B (F)	4
PHYS 110 or 140	3
2 <sup>nd</sup> Language	4-5
Gen Ed EP/BC/CI	3
<b>Total Units</b>	<b>14-15</b>

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

Chem or BIOC elective	3
PHYS 111 or 240	3
2 <sup>nd</sup> Language	4-5
Gen Ed EP/BC/CI	3
Gen Ed EP/BC/CI	3
<b>Total Units</b>	<b>16-17</b>

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

ECOL 182 R/L	3/1
BIOC Elective	3
Additional Units	8
<b>Total Units</b>	<b>15</b>

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

Chem or BIOC elective	3
Gen Ed EP/BC/CI	3
UNIV 301	1
Additional Units	8
<b>Total Units</b>	<b>15</b>