

# BIOLOGY - ASSOCIATE OF SCIENCE DEGREE (AS)

Explore More About This Program: <https://cwi.edu/program/biology>

## Degree Plan

The course sequence listed below is strongly recommended in order to complete your program requirements. Please register for each semester as shown using the Student Planning tool in myCWI. Plans may be modified to fit the needs of part-time students by adding additional semesters. Consult your advisor for any questions regarding this course sequence plan.

### Fall or Spring Start

#### First Year

Fall	Credit Hours
CWI 101 Connecting With Ideas	3
BIOL 111 Biology I (GEM 4)	3
BIOL 111L Biology I Lab (GEM 4)	1
Select <b>one</b> of the following options (GEM 4):	4
CHEM 101 Introduction to Chemistry & 101L and Introduction to Chemistry Lab <sup>1</sup>	
CHEM 111 General Chemistry I & 111L and General Chemistry I Lab <sup>1</sup>	
Select <b>one</b> of the following courses (GEM 3):	3-5
MATH 143 Precalculus I: Algebra or Precalculus	
MATH 147 or Survey of Calculus or Calculus I	
MATH 160 or MATH 170	

**Total Semester Credit Hours 14**

#### Spring

BIOL 112 Biology II <sup>2</sup>	3
BIOL 112L Biology II Lab <sup>2</sup>	1
ENGL 101 Writing and Rhetoric I (GEM 1)	3
SCIE 102 Ethics in Science (GEM 6) <sup>3</sup>	3
GEM 5 - Humanistic & Artistic Ways of Knowing course	3
Major Elective Select a course from your chosen emphasis area (see 'Biology: Major Electives for Emphases') OR any course from the 'Biology: Major Electives for General Degree' course list <sup>4,5</sup>	3-4
<b>Total Semester Credit Hours</b>	<b>17</b>

#### Second Year

Fall	Credit Hours
Select <b>one</b> of the following options:	5
CHEM 102 Essentials of Organic and Biochemistry & 102L and Essentials of Organic and Biochemistry Lab	
CHEM 112 General Chemistry II & 112L and General Chemistry II Lab	
ENGL 102 Writing and Rhetoric II (GEM 1)	3

GEM 5 - Humanistic & Artistic Ways of Knowing course <sup>6</sup>	3
Major Elective Select a course from your chosen emphasis area (see 'Biology: Major Electives for Emphases') OR any course from the 'Biology: Major Electives for General Degree' course list <sup>4,5</sup>	3-4

**Total Semester Credit Hours 15**

#### Spring

Select **one** of the following options: 4

BIOL 113 & 113L Biology III: Principles of Structure and Function and Biology III: Principles of Structure and Function Lab	
MMBS 260 Introduction to Cell Biology & 260L and Introduction to Cell Biology Lab <sup>7</sup>	
MMBS 280 Genetics & 280L and Genetics Lab	

GEM 2 - Oral Communication course 3

GEM 6 - Social & Behavioral Ways of Knowing course <sup>6</sup> 3

Global Perspectives course 3

Major Elective Select courses from your chosen emphasis area (see 'Biology: Major Electives for Emphases') OR any course from the 'Biology: Major Electives for General Degree' course list to reach a minimum of 60 credits earned, if needed <sup>4,5,8</sup>	1-4
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**Total Semester Credit Hours 14**

**Minimum Credit Hours Required 60**

<sup>1</sup> Students who have prior experience with chemistry are strongly encouraged to take the Chemistry Placement exam at the CWI Assessment Center. Passing the Chemistry Placement exam will allow students to register directly into CHEM 111 General Chemistry I.

<sup>2</sup> BIOL 112 and BIOL 112L are best taken within a semester of completing BIOL 111 and BIOL 111L to ensure greater success.

<sup>3</sup> This course fulfills the Ethical Reasoning requirement for an associate degree from CWI.

<sup>4</sup> To complete an AS focused on one emphasis area, complete all of the courses listed under your chosen emphasis on the 'Biology: Major Electives for Emphases' course list below. In order to graduate with a degree that lists your chosen emphasis area, you must select the applicable major. For example, to graduate with an AS that includes an emphasis in Human Biology, students should select 'Biology - Human Biology Emphasis - Associate of Science' as a major.

<sup>5</sup> To complete a general Biology AS without an emphasis, select courses from the 'Biology: Major Electives for General Degree' course list below to bring the total credits earned to at least 60. See catalog and possible transfer institution for elective options. To determine which elective is appropriate, consult your advisor.

<sup>6</sup> Course must come from a different discipline.

<sup>7</sup> MMBS 260 and MMBS 260L are only offered in the Fall semester. Students wishing to take that option should swap it with the CHEM course option listed in the previous semester.

<sup>8</sup> Students must earn a minimum of 60 credits to graduate. It may be possible for students to complete all required courses for a Biology emphasis and have earned less than 60 credits. In this situation, students must select additional credits from the 'Biology: Major

Electives for General Degree' course list to reach a total of at least 60 credits.

### Biology: Major Electives for Emphases

Course	Course Title	Min Credits
<i>Human Biology Emphasis</i>		8
BIOL 227	Human Anatomy and Physiology I	
BIOL 227L	Human Anatomy and Physiology I Lab	
BIOL 228	Human Anatomy and Physiology II	
BIOL 228L	Human Anatomy and Physiology II Lab	
<i>Cellular, Molecular, and Biomedical Sciences Emphasis</i>		8
MMBS 260	Introduction to Cell Biology <sup>1</sup>	
MMBS 260L	Introduction to Cell Biology Lab <sup>1</sup>	
MMBS 280	Genetics <sup>2</sup>	
MMBS 280L	Genetics Lab <sup>2</sup>	
<i>Natural Resources Emphasis</i>		7
ENVI 260	General Ecology <sup>1</sup>	
ENVI 260L	General Ecology Lab <sup>1</sup>	
ENVI 280L	Field Biology <sup>2</sup>	

<sup>1</sup> This course is only offered in the Fall semester.

<sup>2</sup> This course is only offered in the Spring semester.

### Biology: Major Electives for General Degree

Course	Course Title	Min Credits
BIOL 104	Professions in Biology	3
BIOL 113	Biology III: Principles of Structure and Function	3
BIOL 113L	Biology III: Principles of Structure and Function Lab	1
BIOL 199	Biology Special Topics	1-5
BIOL 226	Human Anatomy and Physiology I Plus	1
BIOL 227	Human Anatomy and Physiology I	3
BIOL 227L	Human Anatomy and Physiology I Lab	1
BIOL 228	Human Anatomy and Physiology II	3
BIOL 228L	Human Anatomy and Physiology II Lab	1
BIOL 280	Pathophysiology	4
BIOL 293	Biology Internship	1-3
BIOL 296	Biology Independent Study	1-3
BTEC 293	Biotechnology Internship	1-5
CHEM 102	Essentials of Organic and Biochemistry	4
CHEM 102L	Essentials of Organic and Biochemistry Lab	1
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Lab	1
CHEM 112	General Chemistry II	3
CHEM 112L	General Chemistry II Lab	2

CHEM 293	Chemistry Internship	1-3
CHEM 298	Organic Chemistry I <sup>1</sup>	3
CHEM 298L	Organic Chemistry I Lab <sup>1</sup>	2
ENVI 100	Environmental Science	3
ENVI 100L	Environmental Science Lab	1
ENVI 260	General Ecology <sup>1</sup>	3
ENVI 260L	General Ecology Lab <sup>1</sup>	1
ENVI 280L	Field Biology <sup>2</sup>	3
MATH 144	Precalculus II: Trigonometry	2
MATH 153	Statistical Reasoning	3
MATH 160	Survey of Calculus	4
MATH 170	Calculus I	5
MATH 175	Calculus II	4
MMBS 106	Making Sense of Microbiotic Me	3
MMBS 111	Introductory Microbiology	3
MMBS 111L	Introductory Microbiology Lab	1
MMBS 260	Introduction to Cell Biology <sup>1</sup>	3
MMBS 260L	Introduction to Cell Biology Lab <sup>1</sup>	1
MMBS 280	Genetics <sup>2</sup>	3
MMBS 280L	Genetics Lab <sup>2</sup>	1
PHYS 100	Survey of Physics	3
PHYS 100L	Survey of Physics Lab	1
PHYS 111	General Physics I	3
PHYS 111L	General Physics I Lab	1
SCIE 200	Vertically Integrated Projects (VIP)	1

<sup>1</sup> This course is only offered in the Fall semester.

<sup>2</sup> This course is only offered in the Spring semester.