

# Biology (2012-2013)

## General

This is a **general curriculum** guide and is not applicable to every student and is not a replacement for meeting with your advisor.  
**-Assumes that the MTH 110 prerequisite has been fulfilled-**

Fall Semester – Year One	credits	Winter Semester- Year One	credits
BIO 120: General Biology I ( <i>Gen Ed</i> )	4	BIO 121: General Biology II	4
CHM 115: Principles of Chemistry I ( <i>Gen Ed</i> )	5	CHM 116: Principles of Chemistry II	5
MTH 122: College Algebra ( <i>Gen Ed</i> ) <sup>3</sup> Gen Ed.	3	WRT 150: Strategies in Writing	4
	3	MTH 123: Trigonometry <sup>3</sup>	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16*</b>
Fall Semester – Year Two	credits	Winter Semester – Year Two	credits
BIO 215: General Ecology	4	BIO 375/376: Genetics/Genetics Lab	4
BIO Elective	3	<b>CHM 232: Biological Chemistry</b>	4
<b>CHM 231: Introductory Organic Chemistry</b> <i>Or</i> <sup>1</sup>	4	<b>CHM 242: Organic Chemistry for Life Science II</b>	4
<b>CHM 241: Organic Chemistry for Life Science I</b> Gen Ed.	4	MTH Cognate <sup>2</sup>	3
	3	Gen Ed.	3
<b>Total</b>	<b>14</b>	<b>Total</b>	<b>14</b>
Fall Semester – Year Three	credits	Winter Semester – Year Three	credits
BIO 405/406: Cell and Molecular Bio. w/lab (SWS)	6	PHY 221: General Physics II <sup>3</sup>	5
PHY 220: General Physics I <sup>3</sup>	5	BIO Elective	4
Or		Gen Ed. or Theme	3
PHY 200: Physics for the Life Sciences <sup>3</sup>	4	Gen Ed.	3
Elective	3		
Gen Ed. or Theme	3		
<b>Total</b>	<b>16-17*</b>	<b>Total</b>	<b>15</b>
Fall Semester – Year Four	credits	Winter Semester – Year Four	credits
BIO Elective <sup>4</sup>	3	BIO 495: Evolutionary Biology	3
BIO Elective	3	BIO Elective <sup>5</sup>	3
Elective	3	Elective	4
Elective	3	Gen Ed. or Theme	3
Gen Ed. or Theme	3	Gen Ed. or Theme	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16*</b>

**\*The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.**

### Notes:

<sup>1</sup> If you plan to attend graduate or professional school, you will want to complete the CHM 241/242 sequence.

<sup>2</sup> Choose one of the following to complete the math cognate for the Major: MTH 125: Survey of Calculus, MTH 201: Calculus and Analytical Geometry, or STA 215: Introductory Applied Statistics.

<sup>3</sup> MTH 122/123 are prerequisites for PHY 220 and not part of the Biology major. If a student chooses to take PHY 200 then MTH 122/123 do not need to be completed. PHY 221 is not required, but students planning to attend graduate school, professional school, or secondary teacher certification should complete a full year of physics.

<sup>4</sup> Students must choose at least one animal and one plant biology elective.

<sup>5</sup> The Biology electives consist of 13 credits in Biology at the 200 level. These are in addition to the core. At least 3 credits must be at the 300-400 levels.

### Special Notes:

A. This is a **general** curriculum guide and will not work for everyone, especially those students who have AP, IB or CLEP credit. For students without high school chemistry, CHM 109 is strongly encouraged.

B. Courses that have (*Gen Ed*) written after them are classes that are required in the major and also fulfill a section of the general education program.

C. Students must complete a total of two courses with an SWS attribute.

**It is imperative to meet with your faculty advisor or an advisor in the CLAS Academic Advising Center early in your career.**

The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585.

Online at: <http://www.gvsu.edu/clasadvising>

Prepared by CLAS Academic Advising Center – 1/23/12