

# Biology (2011-2012)

## Animal Emphasis

This is a **general curriculum** guide and is not applicable to every student and is not a replacement for meeting with your advisor.  
**-Student needs MTH 110 prerequisite-**

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
MTH 110: Algebra	4	CHM 115: Principles of Chemistry I ( <i>Gen Ed</i> )	5
WRT 150: Strategies in Writing	4	MTH 122: College Algebra ( <i>Gen Ed</i> ) <sup>2</sup>	3
Gen Ed.	3	Gen Ed.	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Fall Semester – Year Two	credits	Winter Semester – Year Two	credits
BIO 215: General Ecology	4	BIO 375/376: Genetics/Genetics Lab	4
CHM 116: Principles of Chemistry II	5	Elective	3
MTH 123: Trigonometry <sup>2</sup>	3	MTH Cognate <sup>1</sup>	3
Gen Ed.	3	Gen Ed.	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16*</b>
Fall Semester – Year Three	credits	Winter Semester – Year Three	credits
BIO 222: Natural History of Vertebrates	3	<b>CHM 232: Biological Chemistry</b>	4
<b>CHM 231: Introductory Organic Chemistry</b>	4	<i>Or<sup>3</sup></i>	
<b>CHM 241: Organic Chemistry for Life Science I</b>	4	<b>CHM 242: Organic Chemistry for Life Science II</b>	4
PHY 220: General Physics I <sup>2</sup>	5	BIO 232: Natural History of Invertebrates	3
Gen Ed. Or Theme	3	Gen Ed.	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Fall Semester – Year Four	credits	Winter Semester – Year Four	credits
BIO 405/406: Cell and Molecular Bio. w/lab (SWS)	6	BIO 495: Evolutionary Biology	3
BIO 432: Comparative Animal Physiology	4	BIO 302: Comparative Vertebrate Anatomy	4
BIO elective <sup>4, 5</sup>	3	Gen Ed. or Theme	3
Gen Ed. Or Theme	3	Elective	3
<b>Total</b>	<b>16*</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> One course must be selected from MTH 125: Survey of Calculus, MTH 201: Calculus and Analytical Geometry, or STA 215: Introductory Applied Statistics.

<sup>2</sup> MTH 122/123 are prerequisites for PHY 220 and not part of the Biology major. 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>3</sup> If you plan to attend graduate or professional school, you will want to complete the CHM 241/242 sequence.

<sup>4</sup> One elective must be selected from the plant biology category.

<sup>5</sup> The following courses may be of interest when selecting an Animal Biology Emphasis: BIO 342: Ornithology, BIO 352: Animal Behavior, BIO 362: Fisheries Biology, BIO 372: Aquatic Insects, BIO 422: Embryology, BIO 442: Fish Ecology, BIO 572: Field Zoology (with permission), BMS 208: Human Anatomy, BMS 309: Laboratory in Human Anatomy, BMS 290: Human Physiology, BMS 291: Lab in Human Physiology.

### Special Notes:

A. This is a **general** curriculum guide and will not work for everyone, especially for those who have AP or CLEP credit. 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. Complete a total of two courses with an SWS attribute. The two SWS courses may not be taken from the same department or school. One must be from outside the student's major unit.

**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 – 3/8/2011