Biology (2012-2013)

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.

-Assumes that the MTH 110 prerequisite has been fulfilled-

Fall Semester – Year One	credits	Winter Semester- Year One	credits
BIO 120: General Biology I *(Gen Ed)*	4	BIO 121: General Biology II	4
CHM 115: Principles of Chemistry I *(Gen Ed)*	5	CHM 116: Principles of Chemistry II	5
MTH 122: College Algebra *(Gen Ed)*[3]	3	WRT 150: Strategies in Writing	4
Gen Ed.	3	Gen Ed.	3
Total	**15**	***Total***	**16***
Fall Semester – Year Two	**credits**	**Winter Semester – Year Two**	**credits**
BIO 215: General Ecology	4	BIO 375/376: Genetics/Genetics Lab	4
MTH 123: Trigonometry[3]	3	**CHM 232: Biological Chemistry**	4
CHM 231: Introductory Organic Chemistry	4	***Or***[2]	
Or[2]		**CHM 242: Organic Chemistry for Life Science II**	4
CHM 241: Organic Chemistry for Life Science I	4	MTH Cognate[1]	3
Gen Ed.	3	Gen Ed.	3
Total	**14**	***Total***	**14**
Fall Semester – Year Three	**credits**	**Winter Semester – Year Three**	**credits**
BIO 222: Natural History of Vertebrates	3	BIO 232: Natural History of Invertebrates	3
BIO 405/406: Cell and Molecular Bio. w/lab *(SWS)*	6	PHY 221: General Physics II[3]	5
PHY 220: General Physics I[3]	5	Gen Ed.	3
Elective	1	Gen Ed. or Theme	3
Total	**15**	***Total***	**14**
Fall Semester – Year Four	**credits**	**Winter Semester – Year Four**	**credits**
BIO 432: Comparative Animal Physiology	4	BIO 302: Comparative Vertebrate Anatomy	4
BIO elective[4, 5]	3	BIO 495:Evolutionary Biology	3
Elective	3	Elective	3
Gen Ed. or Theme	3	Elective	3
Gen Ed. or Theme	3	Gen Ed. or Theme	3
Total	**16***	***Total***	**16***

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

Notes:

[1] 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.

[2] If you plan to attend graduate or professional school, you will want to complete the CHM 241/242 sequence.

[3] 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

[4] Students must choose one elective from the plant biology category.

[5] 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, 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 courses 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