Cell and Molecular Biology (2010-2011)

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 student has fulfilled MTH 110 requirement-

Fall Semester – Year One	**credits**	**Winter Semester- Year One**	**credits**
BIO 120: General Biology I *(Gen Ed)*	4	CHM 116: Principles of Chemistry II	5
CHM 115: Principles of Chemistry I *(Gen Ed)*	5	WRT 150: Strategies in Writing	4
		MATH/Physics Sequence (Option A or B)[1]	3
MTH 122: College Algebra *(Gen Ed)*	3	Gen Ed.	3
Gen Ed.	3		
Total	15	***Total***	15
Fall Semester – Year Two	**credits**	**Winter Semester – Year Two**	**credits**
CHM 241: Organic CHM for Life I **OR**	4	CHM 242: Organic CHM for Life II **OR**	4
CHM 245/246: Principles of Org. I	4	CHM 247/248: Principles of Org. II	4
MATH/Physics Sequence (Option A or B)[2]	4-5	BIO 375: Genetics	3
STA 215: Introductory Applied Statistics	3	BIO 376: Genetics Laboratory	1
CMB 250: Introduction to Biotechnology	3	Physics Sequence[3]	5
		Gen Ed.	3
Total	14-15	***Total***	16
Fall Semester – Year Three	**credits**	**Winter Semester – Year Three**	**credits**
BIO 405: Cell and Molecular Biology	4	CHM 462: Techniques in Biochemistry	3
BIO 406: Cell and Molecular Lab	2	Microbiology course (Option A or B)[5]	4
CHM 461: Biochemistry I	4	WRT 305: Writing in the Disciplines[6]	3
Physics Sequence[4]	5	Gen Ed. or Theme	3
		Gen Ed. or Theme	3
* ***Total***	15	***Total***	16
Fall Semester – Year Four	**credits**	**Winter Semester – Year Four**	**Credits**
BIO 426: Nucleic Acids Laboratory	2	CMB 495: Perspectives and Issues in CMB (Capstone)	3
CMB 490: Internship in CMB[7] **OR**	1		
CMB 499: Research in CMB[7]	1	CMB 490: Internship in CMB **OR**	2
CMB Elective	3	CMB 499: Independent Research in CMB	2
Gen Ed. or Theme	3	Gen Ed. or Theme	3
Gen Ed. or Theme	3	Gen Ed. or Theme	3
		Gen Ed. or Theme	3
Total	12	***Total***	14

Notes:

* Application to the CMB program will typically take place in the first semester of the junior year, after the student has completed CMB 250.

[1] Students must select a math/physics option (either option A or B). Option A consists of MTH 125: Survey of Calculus, PHY 220: General Physics I, and PHY 221: General Physics II **(For students completing Option A, MTH 122 and 123 must be completed before taking PHY 220**). Option B consists of MTH 201: Calculus I, MTH 202 Calculus II, PHY 230: Principles of Physics I, and PHY 231: Principles of Physics II. Regardless of the chosen option, the math courses must be taken first. If selecting option B, you must take MTH 123 before MTH 201 (take in place of the gen ed in the first semester).

[2] If you selected option A, take PHY 220. If you selected option B, take MTH 202.

[3] If you selected option A, take PHY 221. If you selected option B, take PHY 230.

[4] If you selected option A, you may take a CMB elective in this semester. If you selected option B, take PHY 231.

[5] Student must select a microbiology course (option A or B). Option A is BIO 357: Environmental Microbiology. Option B is BMS 212/213: Introductory Microbiology w/Lab.

[6] Students who pass out of WRT 305 have room to take a GenEd, Theme, or elective course in this semester.

[7] Students should consult with their CMB faculty member about taking this course in the spring/summer before the senior year.

Special Notes:

A. This is a **general** curriculum guide and will not work for everyone, especially those students 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. Remember to fulfill your 2 SWS requirements; 1 can be taken in the gen ed program and 1 in your major.

D. Some classes are in multiple sections within the gen ed. If you take a course that can be counted in two categories, you can open up 1-2 more spots for major electives.

E. You must have **120 credits** to graduate from Grand Valley State University.

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 – 2/4/10