Chemistry (2010-2011)

Biochemistry and Biotechnology Emphasis

(This emphasis prepares students for entry level employment in biotechnical or biomedical laboratories or for entry into medical or dental schools)

This is a **general curriculum** guide and is not applicable to every student and is not a replacement for meeting with your advisor.

-If a student is starting in MTH 110-

Fall Semester – Year One	**credits**	**Winter Semester- Year One**	**credits**
MTH 110: Algebra	4	CHM 115: Principles of Chemistry I *(Gen Ed)*	5
WRT 150: Strategies in Writing	4	MTH 122: College Algebra *(Gen Ed)*	3
BIO 120: General Biology I *(Gen Ed)*	4	MTH 123: Trigonometry	3
Gen Ed.	3	Gen Ed.	3
Total	15	***Total***	14
Spring Semester – Year One	**credits**	**Summer Semester – Year One**	**credits**
CHM 116: Principles of Chemistry II	5		
Fall Semester – Year Two	**credits**	**Winter Semester – Year Two**	**credits**
CHM 245: Principles of Organic I[1]	3	CHM 222: Quantitative Analysis	3
CHM 246: Principles of Organic I Lab	1	CHM 247: Principles of Organic II[1]	3
MTH 201: Calculus I	5	CHM 248: Principles of Organic II Lab	1
Gen Ed.	3	BIO 375/376: Genetics w/Lab	4
Gen Ed.	3	Gen Ed.	3
Total	15	***Total***	14
Fall Semester – Year Three	**credits**	**Winter Semester – Year Three**	**credits**
PHY 220: General Physics I	5	CHM 225: Instrumental Analysis I	3
CHM 391: Chemistry Seminar I[2]	0	PHY 221: General Physics II	5
CHM 461: Biochemistry I	4	CHM 391: Chemistry Seminar I[2]	1
Cognate Elective*	3	CHM 462: Biochemistry Techniques	3
WRT 305: Writing in the Disciplines[3]	3	CHM 463: Biochemistry II (Capstone)	3
Total	15	***Total***	15
Fall Semester – Year Four	**credits**	**Winter Semester – Year Four**	**credits**
CHM 351: Introduction to Physical Chemistry	3	CHM 352: Applied Physical Chemistry	1
CHM 491: Chemistry Seminar II[2]	0	CHM 491: Chemistry Seminar II[2]	1
Cognate Elective*	3	Cognate Elective*	4
Cognate Elective*	3	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	15	***Total***	15

-Students interested in Graduate School should take CHM 356, 353, 358 and 355 or 455 instead of CHM 351 and 352. PHY 230/231 should be taken in place of PHY 220/221 and MTH 202 should also be taken-

Notes:

*Students should consult with your faculty advisor to determine the most appropriate cognate electives.

[1] CHM 241 and CHM 242 may substitute for CHM 245/246/247/248. However, students must also take CHM 249 plus 28 additional lab-hour electives.

[2] Required of all chemistry majors. Two semesters of seminar are required for one credit. Students should register for zero credit in their first semester and one credit in their second semester.

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

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 chemistry 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 – 4/23/2010