

# Chemistry (2011-2012)

## Secondary Teacher Certification

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

**-Assumes MTH 110 prerequisite has been fulfilled-**

Fall Semester – Year One	credits	Winter Semester – Year One	credits
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> )	3	MTH 123: Trigonometry	3
WRT 150: Strategies in Writing	4	BIO 120: General Biology I ( <i>Gen Ed</i> )	4
PSY 101: Introductory Psychology ( <i>Gen Ed</i> )	3	Gen Ed.	3
	<b>Total</b>	<b>15</b>	<b>Total</b>
<b>Spring Semester – Year One</b>	<b>credits</b>	<b>Summer Semester – Year One</b>	<b>credits</b>
BIO 121: General Biology II	4	Minor Elective	3
Fall Semester – Year Two	credits	Winter Semester – Year Two	credits
CHM 222: Quantitative Analysis	3	CHM 225: Instrumental Analysis I	3
CHM 245: Principles of Organic I <sup>1</sup>	3	CHM 247: Principles of Organic II <sup>1</sup>	3
CHM 246: Principles of Organic I Lab	1	CHM 248: Principles of Organic II Lab	1
MTH 201: Calculus I	5	PSY 301: Child Development*	3
ED 315: Diverse Perspectives on Education* ( <i>Gen Ed</i> )	3	Minor Elective	3
	<b>Total</b>	<b>15</b>	Gen Ed. or Theme
			<b>Total</b>
<b>Spring Semester – Year Two</b>	<b>credits</b>	<b>Summer Semester – Year Two</b>	<b>credits</b>
Minor Elective	3		
Fall Semester – Year Three	credits	Winter Semester – Year Three	credits
CHM 391: Chemistry Seminar I <sup>2</sup>	0	CHM 391: Chemistry Seminar I <sup>2</sup>	1
ED 337: Intro to Learning and Assessment*	3	Gen Ed.	3
PHY 220: General Physics I	5	PHY 221: General Physics II	5
Gen Ed. or Theme	3	Gen Ed. or Theme	3
GEO 111: Exploring the Earth	4	Minor Elective	3
	<b>Total</b>	<b>15</b>	<b>Total</b>
			<b>15</b>
Fall Semester – Year Four	credits	Winter Semester – Year Four	credits
CHM 232: Biological Chemistry OR	4	CHM 352: Applied Physical Chemistry (SWS)	1
CHM 461: Biochemistry I	4	CHM 419: Chemistry in Secondary Education (Capstone)	3
CHM 351: Introduction to Physical Chemistry	3	CHM 491: Chemistry Seminar II <sup>2</sup>	1
CHM 491: Chemistry Seminar II <sup>2</sup>	0	Gen Ed. or Theme	3
Minor Elective	3	Minor Elective	3
Minor Elective	3	Minor Elective	3
Gen Ed. or Theme	3		
	<b>Total</b>	<b>16<sup>#</sup></b>	<b>Total</b>
			<b>16<sup>#</sup></b>
Fall Semester – Year Five	credits	Winter Semester – Year Five	credits
ED 331: Methods and Strategies for Secondary Teaching	5	ED 431: Student Teaching, Secondary	10
ED 310: Organizing and Managing Classroom Environments	3	ED 485: The Context of Educational Issues	3
ED 321: Content Area Literacy	3		
ED 370: Technology in Education**	3		
ED 379: Universal Design for Learning: Secondary**	3		
	<b>Total</b>	<b>17<sup>#</sup></b>	<b>Total</b>
			<b>13</b>

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

### Notes:

\* These courses are Education Major prerequisites. Student must have a minimum GPA of 2.7 in these classes, and both their major and minor. Classes must be completed prior to applying to the School of Education. A student selecting secondary education must also have a teachable minor. **Consult with your advisor early to select a minor!**

\*\* ED 370 and/or ED 379 may be taken during or after Assisting but must be taken before Student Teaching.

<sup>1</sup> CHM 241 and CHM 242 may substitute for CHM 245/246/247/248. However, students must also take CHM 249 plus upper-level chemistry electives that include a total of 28 lab-hours.

<sup>2</sup> Required of all chemistry majors. Two semesters of seminar are required for one credit. Students should register for zero credits in their first semester and one credit in their second semester.

### Special Notes:

- This is a **general curriculum** guide and will not work for everyone, especially those students who have AP or CLEP credit.
- 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.
- 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