Physics (2010-2011)

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.

-Student is starting in MTH 201-

Fall Semester – Year One	credits	Winter Semester- Year One	credits
MTH 201: Calculus I *(Gen Ed)*	5	MTH 202: Calculus II	4
WRT 150: Strategies in Writing	4	PHY 230: Principles of Physics I	5
CHM 115: Principles of Chemistry I *(Gen Ed)*	5	PSY 101: Introductory Psychology *(Gen Ed)*	3
		Gen Ed.	3
Total	14	***Total***	15
Spring Semester – Year One	**credits**	**Summer Semester – Year One**	**credits**
Minor Elective	3	Gen Ed.	3
Gen Ed.	3		
Total	6	***Total***	3
Fall Semester – Year Two	**credits**	**Winter Semester – Year Two**	**credits**
PHY 231: Principles of Physics II	5	PHY 302: Introduction to Modern Physics	4
MTH 203: Calculus III	4	MTH 304: Analysis of Differential Equations **OR**	3
MTH 227: Linear Algebra I	3	MTH 302: Linear Algebra & Diff. Equations	4
ED 315: Diverse Perspectives on Education *(Gen Ed)**	3	CIS 261: Structured Programming in C	3
		BIO 120: General Biology I *(Gen Ed)*	4
Total	15	***Total***	14-15
Spring Semester – Year Two	**credits**	**Summer Semester – Year Two**	**credits**
HSC 201: The Scientific Revolution *(Gen Ed)* **OR**	3	Minor Elective	3
HSC 202: The Technological Revolution *(Gen Ed)*	3	Gen Ed. or Theme	3
Minor Elective	3		
Total	6	*Total*	6
Fall Semester – Year Three	**credits**	**Winter Semester – Year Three**	**credits**
MTH 401: Math for the Physical Sciences***	4	PHY 311: Advanced Laboratory II	2
PHY 309: Experimental Methods in Physics	4	PHY 340: Intermediate Electricity and Magnetism	4
PHY 330: Intermediate Mechanics and Dynamics	4	PHY 105: Descriptive Astronomy[3]	3
WRT 305: Writing in the Disciplines[1]	3	PSY 301: Child Development*	3
		ED 337: Introduction to Learning and Assessment *	3
Total	16	***Total***	15
Spring Semester – Year Three	**credits**	**Summer Semester – Year Three**	**credits**
Minor Elective	3	Minor Elective	3
Gen Ed.	3	Gen Ed	3
Total	6	***Total***	6
Fall Semester – Year Four	**credits**	**Winter Semester – Year Four**	**credits**
PHY 360: Statistical Thermodynamics	4	PHY 350: Intermediate Modern Physics	4
PHY 485: Senior Project I	1	PHY 486: Senior Project II (Capstone)	2
Ethics in Science Requirement[2]	3	Science Elective[3]	3
Minor Elective	3	Minor Elective	3
Gen Ed. or Theme	3	Minor Elective	3
Total	14	***Total***	15
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		
Total	17	***Total***	13

Notes:

* These courses are prerequisites to the college of education. 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 College of Education. A student selecting secondary education must also have a teachable minor. **Consult with your advisor!**

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

***This course replaces MTH 300 in the major. In Fall 2010, it will be offered for the first time as MTH 480. After that, the course number will change to MTH 401.

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

[2] Students must take BIO 328: Biomedical Ethics **OR** BIO 338: Environmental Ethics.

[3] Students must complete 6 hours of science electives with a minimum grade of C (2.0) in each. Must be chosen from the following: PHY 105 (requirement for secondary education majors); any 300 or 400 level physics elective, excluding PHY 303, 306, and 307; CHM 351, 352, 356, or 358

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 physics electives.

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

F. 30 hours as a tutor and 30 hours in the lab are required of students seeking teacher certification. Contact the department for further information.

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 – 4/17/2010