

**INTEGRATED SCIENCE-BS-SECONDARY EDUCATION**(WITH EDUCATION MAJOR)THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

Year One			
<b>BIO 121</b> General Biology II w/lab Prerequisite: MTH 110 (may be taken concurrently)	4	<b>BIO 120</b> General Biology I w/lab Prerequisites: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or 115 may be taken concurrently)	4
<b>CHM 115</b> Principles of Chemistry I w/lab Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)	4	<b>CHM 116</b> Principles of Chemistry II w/lab Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)	5
<b>WRT 150</b> Strategies in Writing or WRT 120 in fall, WRT 130 in winter <sup>1</sup>	4/3	<b>PSY 101</b> Introductory Psychology (SBS) or WRT 130 if taking WRT 120 in the fall <sup>1</sup>	3
<b>MTH 201</b> Calculus I Prerequisites: MTH 122 and MTH 123, or MTH 124 or assignment through Grand Valley math placement	4	<b>MTH 202</b> Calculus II Prerequisite: MTH 201	4
<i>Total</i>	15	<i>Total</i>	16**
Year Two			
<b>BIO 215</b> Ecology w/lab ( <i>summer and fall only</i> ) Prerequisites: BIO 120 and BIO 121 (BIO 120 may be taken concurrently)	4	<b>GEO 112</b> Earth History Prerequisite: GEO 111 (preferred) or GEO 100 or GEO103, or GEO 105	4
<b>GEO 111</b> Exploring the Earth	4	<b>BIO 210</b> Evolutionary Biology Prerequisites: BIO 120 and BIO 121	3
<b>EDF 315</b> Diverse Perspectives on Education (US Div.)	3	<b>PSY 301</b> Child Development Prerequisite: PSY 101	3
<b>Gen Ed (PSY 101 if not yet taken)</b>	3	<b>Gen Ed</b>	3
<i>Total</i>	14	<i>Total</i>	13
Spring/Summer			
<b>Gen Ed</b>	3		
<i>Total</i>	3		
Year Three			
<b>PHY 230</b> Principles of Physics I Prerequisite: MTH 201 (MTH 202 is recommended as a Corequisite)	5	<b>PHY 231</b> Principles of Physics II Prerequisite: PHY 230 and MTH 202	5
<b>CHM 231</b> Introductory Organic Chemistry Prerequisite: CHM 109 or CHM 116	4	<b>CHM 221</b> Survey of Analytical Chemistry Prerequisites: CHM 116 or one full year of general chemistry	4
<b>GEO 203</b> Weather and Climate for Pre-Service Teachers	3	<b>BIO 375</b> Genetics Prerequisite: BIO 120 Corequisite: BIO 376	3
<b>Gen Ed</b>	3	<b>BIO 376</b> Genetics Laboratory Prerequisites: Concurrent enrollment in BIO 375 or successful completion of BIO 355	1
<i>Total</i>	15	<i>Total</i>	13
Year Four			
<b>SCI 440</b> Physics and Chemistry in Secondary Education Prerequisites: Junior Standing, CHM 116 and PHY 221 or PHY 231	3	<b>SCI 450</b> Earth and Life Science in Secondary Education Prerequisite: Junior Standing, BIO 120 and BIO 121, or GEO 111 and Geo 112	3
<b>CHM 351</b> Introduction to Physical Chemistry Prerequisites: CHM 116, MTH 201, and PHY 220 or PHY 230 (may be taken concurrently)	3	<b>PHY 302</b> Introduction to Modern Physics Prerequisite: PHY 231	4
<b>GEO 214</b> Solid Earth Materials and Systems Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175)	4	<b>GEO 220</b> Earth Surface Materials and Systems Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175	4
<b>PHY 105</b> Descriptive Astronomy	3	<b>Issues (SWS)</b> <sup>3</sup>	3
<b>EDI 339</b> Assessment in Secondary Schools	3		
<i>Total</i>	16**	<i>Total</i>	14
Year Five			
<b>Student Assisting Apprenticeship:</b>		<b>Student Teaching Internship:</b>	
<b>EDI 331</b> Methods and Strategies of Secondary Teaching	5	<b>EDI 431</b> Student Teaching: Secondary	8
<b>EDI 310</b> Organizing and Managing Classroom Environments	3	<b>EDI 432</b> Student Teaching: Secondary Content	2
<b>EDR 321</b> Content Area Literacy (SWS)		<b>EDF 495</b> The Context of Educational Issues	3
<sup>5</sup> <b>EDS 379</b> Universal Design for Learning: Secondary Sophomore Standing, EDF 315, and EDI 339. B- or better required.	3	Must be taken with or after EDI 431	
	3		
	3		

<b>EDT 476</b> Technology in Education Must be taken with or after EDI 331 but before EDI 431	3		
<i>Total</i>	<i>17**</i>	<i>Total</i>	<i>13</i>

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

<sup>1</sup> Students who self-place into WRT120 should take this course in the fall semester and then take WRT 130 in the winter semester of the first year. Students who self-place into WRT 150 should take this course in either semester of the first year. A grade of C or higher is required to fulfill these requirements.

<sup>2</sup> **Students in MTH 122 are encouraged to take the Math Proficiency Tests for MTH 122 and/or 123 online:** [www.gvsu.edu/s/mv](http://www.gvsu.edu/s/mv)

<sup>3</sup> Students must complete a total of two courses with an SWS attribute.

<sup>4</sup> Admission into the apprenticeship and internship semesters is a secondary application process. Plan to apply the semester before the semester you plan on starting teacher assisting.

<sup>5</sup> EDS 379 may be taken prior to the Apprenticeship Semester but must be completed prior to the Internship Semester. Permit required (Education – 616-331-6650). Prerequisites for EDS 379: Sophomore Standing, EDF 315, and EDI 339. B- or better required.

<b>General Education Categories fulfilled by the Integrated Science major:</b>	
Life Science and Physical Science: BIO 120 and CHM 115 (both fulfill lab requirement), PHY 230	
Mathematical Sciences: MTH 122, MTH 123, MTH 124, MTH 201	
Social and Behavioral Sciences: PSY 101	US Diversity: EDF 315
Issues: EDT 476	

<b>Second Major in Education</b>	
<b>Education Major Prerequisites (9 credits)</b>	
<b>A 2.7 cumulative GPA in the Education Major Prerequisites is required with no grade lower than a C</b>	
— EDF 315 Diverse Perspectives on Education (3)	— PSY 301 Child Development (3)
— EDI 339 Introduction to Learning and Assessment (3)	Prerequisite: PSY 101
<b>Teacher Assisting (14 - 17 credits)</b>	<b>Student Teaching (13 credits)</b>
— EDI 331 Teacher Assisting-Secondary (5) — EDI 310 Organizing and Managing Classroom Environments (3) — EDR 321 Content Area Literacy (3) — EDT 476 Technology in Education (3) Must be taken with or after EDI 331 but before EDI 431 — EDS 379 Universal Design for Learning: Secondary (3)** ** Starting Fall 2013, EDS 379 may be taken prior to the Teacher Assisting Semester. Please consult with your College of Education Advisor to determine an appropriate time to take this course.	— EDI 431 Student Teaching, Secondary (8) — EDI 432 Student Teaching, Secondary Content (2) — EDF 495 The Context of Educational Issues (3) Must be taken with or after EDI 431

### Guide for Declaring Majors

1. Log into myBanner from the GVSU homepage
2. Once logged in select "Student", "Student Records", and then, "Change Major"
3. Click on the "Change Major 1/Program" box  
Click on the down arrow in the box next to "New Major 1/Program," from here scroll down and choose: "Integrated Science BS-Secondary"  
Click "Submit." The system will automatically declare your 2<sup>nd</sup> major in "Education" and give you the option to declare a minor.  
**\*\*\*\*\*Integrated Science-Secondary is a comprehensive major and a minor is not required.**

Teachable Majors		Teachable Minors	
Biology	Mathematics	Biology-Teaching	History-Teaching
Chemistry	Music (K-12)	Chemistry-Teaching	Mathematics-Secondary Education
Earth/Space Science	Health & Physical Education(K-12)	Earth/Space Science-Teaching	Economics-Teaching
English	Physics	Physics-Teaching	English-Teaching
French	Social Studies	Political Science-Teaching	Applied Linguistics—ESL
German	Spanish	French-Teaching	Psychology-Teaching
History	Visual Arts (K-12)	Geography-Teaching	German-Teaching
Integrated Science			Spanish-Secondary Teaching
Latin		<b>*****Integrated Science-Secondary is a comprehensive major and a minor is not required.</b>	

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.  
The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585 <http://www.gvsu.edu/clasadvising>