

**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<br>Prerequisite: MTH 110 (may be taken concurrently)                                             | 4    | <b>BIO 120</b> General Biology I w/lab<br>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<br>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<br>Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)                                                       | 5    |
| <b>WRT 150</b> Strategies in Writing<br>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<br>Prerequisites: MTH 122 and MTH 123, or MTH 124 or assignment through Grand Valley math placement            | 4    | <b>MTH 202</b> Calculus II<br>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> )<br>Prerequisites: BIO 120 and BIO 121 (BIO 120 may be taken concurrently)   | 4    | <b>GEO 112</b> Earth History<br>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<br>Prerequisites: BIO 120 and BIO 121                                                                                           | 3    |
| <b>EDF 315</b> Diverse Perspectives on Education (US Div.)                                                                               | 3    | <b>PSY 301</b> Child Development<br>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<br>Prerequisite: MTH 201 (MTH 202 is recommended as a Corequisite)                                | 5    | <b>PHY 231</b> Principles of Physics II<br>Prerequisite: PHY 230 and MTH 202                                                                                        | 5    |
| <b>CHM 231</b> Introductory Organic Chemistry<br>Prerequisite: CHM 109 or CHM 116                                                        | 4    | <b>CHM 221</b> Survey of Analytical Chemistry<br>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<br>Prerequisite: BIO 120 Corequisite: BIO 376                                                                                               | 3    |
| <b>Gen Ed</b>                                                                                                                            | 3    | <b>BIO 376</b> Genetics Laboratory<br>Prerequisites: Concurrent enrollment in BIO 375 or successful completion of BIO 355                                           | 1    |
|                                                                                                                                          |      | <b>Issues</b>                                                                                                                                                       | 3    |
| <i>Total</i>                                                                                                                             | 15   | <i>Total</i>                                                                                                                                                        | 16** |
| Year Four                                                                                                                                |      |                                                                                                                                                                     |      |
| <b>SCI 440</b> Physics and Chemistry in Secondary Education<br>Prerequisites: Junior Standing, CHM 116 and PHY 221 or PHY 231            | 3    | <b>SCI 450</b> Earth and Life Science in Secondary Education<br>Prerequisite: Junior Standing, BIO 120 and BIO 121, or GEO 111 and Geo 112                          | 3    |
| <b>CHM 351</b> Introduction to Physical Chemistry<br>Prerequisites: CHM 116, MTH 201, and PHY 220 or PHY 230 (may be taken concurrently) | 3    | <b>PHY 302</b> Introduction to Modern Physics<br>Prerequisite: PHY 231                                                                                              | 4    |
| <b>GEO 214</b> Solid Earth Materials and Systems<br>Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175)                               | 4    | <b>GEO 220</b> Earth Surface Materials and Systems<br>Prerequisites: GEO 111, CHM 115, GEO 112, and GEO 175                                                         | 4    |
| <b>PHY 105</b> Descriptive Astronomy                                                                                                     | 3    | <b>Issues (SWS)<sup>3</sup></b>                                                                                                                                     | 3    |
| <b>EDI 339</b> Assessment in Secondary Schools                                                                                           | 3    |                                                                                                                                                                     |      |
| <i>Total</i>                                                                                                                             | 16** | <i>Total</i>                                                                                                                                                        | 14   |
| <i>Continued on back...</i>                                                                                                              |      |                                                                                                                                                                     |      |

| Year Five <sup>3</sup>                                        |           |                                                                  |             |
|---------------------------------------------------------------|-----------|------------------------------------------------------------------|-------------|
| <b>Teacher Assisting</b>                                      |           | <b>Student Teaching</b>                                          |             |
| <b>EDI 331</b> Methods and Strategies of Secondary Teaching   | 5         | <b>EDS 379</b> Universal Design for Learning: Secondary          | 3           |
| <b>EDI 310</b> Organizing and Managing Classroom Environments | 3         | Sophomore Standing, EDF 315, and EDI 339. B- or better required. |             |
| <b>EDR 321</b> Content Area Literacy (SWS)                    | 3         | <b>EDI 431</b> Student Teaching: Secondary                       | 8           |
| <b>EDT 370</b> Technology in Education                        | 3         | <b>EDI 432</b> Student Teaching: Secondary Content               | 2           |
| Must be taken with or after EDI 331 but before EDI 431        |           | <b>EDF 485</b> The Context of Educational Issues                 | 3           |
|                                                               |           | Must be taken with or after EDI 431                              |             |
| <i>Total</i>                                                  | <i>14</i> | <i>Total</i>                                                     | <i>16**</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 College of Education is a secondary application process. Plan to apply to the College of Education the semester before the semester you plan on starting teacher assisting.

| General Education Categories fulfilled by the Integrated Science major:                        |                       |
|------------------------------------------------------------------------------------------------|-----------------------|
| 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 |

| Second Major in Education                                                                                                                                                                        |                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Education Major Prerequisites (9 credits)                                                                                                                                                        |                                                   |
| A 2.7 cumulative GPA in the Education Major Prerequisites is required with no grade lower than a C                                                                                               |                                                   |
| — 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 431 Student Teaching, Secondary (8)         |
| — EDI 310 Organizing and Managing Classroom Environments (3)                                                                                                                                     | — EDI 432 Student Teaching, Secondary Content (2) |
| — EDR 321 Content Area Literacy (3)                                                                                                                                                              | — EDF 485 The Context of Educational Issues (3)   |
| — EDT 370 Technology in Education (3)                                                                                                                                                            | Must be taken with or after EDI 431               |
| 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. |                                                   |

### 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 | Physical Education (K-12) | Earth/Space Science-Teaching                                                                    | Physical Education-Teaching     |
| English             | Physics                   | Economics-Teaching                                                                              | Physics-Teaching                |
| French              | Social Studies            | English-Teaching                                                                                | Political Science-Teaching      |
| German              | Spanish                   | French-Teaching                                                                                 | Psychology-Teaching             |
| History             | Visual Arts (K-12)        | Geography-Teaching                                                                              | School Health Education         |
| Integrated Science  |                           | German-Teaching                                                                                 | Spanish-Secondary Teaching      |
| Latin               |                           |                                                                                                 | Applied Linguistics – ESL       |
|                     |                           | <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>  
Your Academic Advisor in the CLAS Advising Center is Emily Davis, [davisem1@gvsu.edu](mailto:davisem1@gvsu.edu).