

**INTEGRATED SCIENCE-BS (WITH EDUCATION MAJOR & ELEMENTARY CERTIFICATION MINOR)**THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR**A 2.7 cumulative GPA in the Integrated Science major is required for admission to the College of Education**

Year One			
CHM 201 Introduction of Chemical Sciences <i>Gen Ed</i>	4	BIO 120 General Biology I or BIO 121 General Biology II	4
BIO 120 General Biology I or BIO 121 General Biology II Prerequisites: BIO 120: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or 115 may be taken concurrently) BIO 121: MTH 110 or higher (may be taken concurrently)	4	Prerequisites: BIO 120: High school chemistry, CHM 109, or CHM 115 strongly recommended (CHM 109 or 115 may be taken concurrently) BIO 121: MTH 110 or higher (may be taken concurrently)	4
Gen Ed or WRT 120 Writing with a Purpose – Optional <sup>1</sup>	3/4	MTH 110 Algebra	3
EDF 100 Introduction to Education ( <b>optional – see below</b> )	2	PSY 101 Psychology <i>Gen Ed</i>	4/3
		<sup>1</sup> WRT 150 Strategies in Writing or WRT 130	
<i>Total</i>	<i>13/14</i>	<i>Total</i>	<i>15</i>
Year Two			
BIO 205 Genetics for K-8 Pre-Service Teachers Prerequisites: BIO 120, BIO 121, (MTH 110 or MTH 122 or MTH 201), CHM 109 or CHM 201 recommended	2	PHY 201 Inquiry: The Mechanical and Thermal World	4
GEO 203 Weather for K-8 Pre-Service Teachers	3	PED 265 Teaching Health in Elementary Schools	2
MTH 221 Mathematics for Elementary Teachers I <i>Gen Ed</i> Prerequisites: MTH 110 or MTH 122 and sophomore standing	4	MTH 222 Mathematics for Elementary Teachers II Prerequisites: MTH 110 or MTH 122 and sophomore standing; MTH 221 strongly suggested	3
EDF 315 Diverse Perspectives on Education <i>Gen Ed</i>	3	PSY 301 Child Development Prerequisite: PSY 101	3
Gen Ed	3	Gen Ed	3
<i>Total</i>	<i>13</i>	<i>Total</i>	<i>15</i>
Year Three			
<sup>4</sup> GEO 201 The Geosphere for K-8 Pre-Service Teachers	4	GEO 202 Hydrosphere for Teachers	4
<sup>3</sup> PHY 202 – Physics for K-8 Teachers, Motion, Energy, and Forces	2	SST 309 Social Students for Elementary Teachers Prerequisites: Junior standing or approval by instructor	3
PED 266 Move-Dance-Learn! PE & Dance for Elementary Education	2	PHY 205 Astronomy for K-8 Pre-Service Teachers	2
EDI 338 Assessment in Elementary Schools Gen Ed	3 3	<sup>3</sup> PHY 203 – Physics for K-8 Teachers, Light, Sound, and Electromagnetism  Gen Ed	2
<i>Total</i>	<i>14</i>	<i>Total</i>	<i>14</i>
Year Four			
SCI 319 Science in Elementary Education Prerequisites: BIO 120, CHM 201 or CHM 109, PHY 200 or PHY 201, and GEO 201	2	SCI 495 Teaching Science in the 21 <sup>st</sup> Century (Capstone) Prerequisites: Senior standing and SCI 319	3
<sup>2,4</sup> SCI 336 Ecology for K-8 Pre-Service Teachers <i>SWS</i> Prerequisites: BIO 205, CHM 201 or CHM 109, PHY 201, GEO 202, GEO 203 (GEO 201 recommended)	4	ENG 308 Teaching Reading: The Necessary Skills Prerequisite: WRT 150 and Junior Standing	4
MAT 300 Music Art & Theater for Elementary Education Issue	3 3	ENG 302 Introduction to Language Arts: Teaching Writing and Children's Literature Prerequisites: WRT 150 and one of EDI 338 or PED 265 or PED 266 Issue	3 3
<sup>5</sup> EDS 378 Universal Design for Learning: Elementary Sophomore Standing, EDF 315, and EDI 338. B- or better required	3		
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>13</i>
Teacher Preparation Professional Program			
Teacher Assisting		Student Teaching	
EDI 330 Teacher Assisting: Elementary	5	EDI 430 Student Teaching: Elementary	10
EDI 310 Organizing & Managing Classroom Environments	3	EDF 485 The Context of Educational Issues	3
EDR 320 Reading: Assessment and Instruction	3		
EDT 370 Technology in Education Must be taken with or after ED 330 but before ED 430	3		
<i>Total</i>	<i>14</i>	<i>Total</i>	<i>13</i>

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. Online at: <http://www.gvsu.edu/clasadvising>  
Your Academic Advisor in the CLAS Advising Center is Emily Davis, [davisem1@gvsu.edu](mailto:davisem1@gvsu.edu).

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

**EDF 100 is an exploratory elective for students uncertain about pursuing teacher certification. It can be taken in either the fall or winter semester. PHY 280 – Forces and Energy (2 credits, Fall semester) and PHY 280 – Electricity and Magnetism (2 credits, Winter semester) together can replace PHY 200 – Physics for the Life Sciences (4 credits) in the Integrated Science major.**

<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. Students will not need to take WRT 150 (or WRT 120 & 130) if they have earned credit for the course through AP/Dual Enrollment. A grade of C or better is required in these courses.

<sup>2</sup>Students must complete a total of two courses with an SWS attribute.

<sup>3</sup> PHY 202 is only offered in the fall semester. PHY 203 is only offered in the winter semester.

<sup>4</sup> GEO 201 is only offered in the fall semester. SCI 336 is offered only the fall and spring/summer (1<sup>st</sup> six weeks) semesters.

<sup>5</sup> EDS 378 may be taken prior to the Teacher Assisting Semester but must be completed prior to Student Teaching. Permit required (COE – 616-331-6650).

<b>Elementary Certification Minor (22-24 credits)</b>	
<b>A 2.7 cumulative GPA in the Elementary Certification minor is required for admission to the College of Education</b>	
<b>— ENG 308 Teaching Reading: The Necessary Skills (4)</b> Prerequisites: WRT 150 and Junior Status <b>— PED 265 Teaching Health in Elementary Schools (2)</b> <b>— PED 266 Move-Dance-Learn! PE &amp; Dance for Elementary Ed (2)</b> <b>— SST 309 Social Studies for Elementary Teachers (3)</b> Prerequisites: Junior standing or permission of instructor <b>— ENG 302 Introduction to Language Arts: Teaching Writing &amp; Children’s Literature</b> Prerequisite: WRT 150 and one of EDI 338 or PED 265 or PED 266	<b>— MAT 300 Music, Art &amp; Theatre for Elementary Education (3)</b> <b>— MTH 221 Mathematics for Elementary Teachers I (4)</b> Prerequisites: MTH 110 or MTH 122 and at least sophomore standing <b>— MTH 222 Mathematics for Elementary Teachers II (3)</b> Prerequisites: MTH 110 or MTH 122 and at least sophomore standing; MTH 221 strongly recommended <i>May be completed in place of MTH 221 and MTH 222</i> <b>— MTH 223 Mathematics for Elementary Teachers III (5)</b> Prerequisite: MTH 201
<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>	
<b>— EDF 315 Diverse Perspectives on Education (3)</b> <b>— EDI 338 Assessment in Elementary Schools (3)</b>	<b>— PSY 301 Child Development (3)</b> Prerequisite: PSY 101
<b>Teacher Assisting (17 credits)</b>	<b>Student Teaching (13 credits)</b>
<b>— EDI 330 Teacher Assisting-Elementary (5)</b> <b>— EDI 310 Organizing and Managing Classroom Environments (3)</b> <b>— EDR 320 Reading: Assessment and Instruction (3)</b> <b>— EDT 370 Technology in Education (3)</b> Must be taken with or after ED 330 but before ED 430 <b>— EDS 378 Universal Design for Learning: Elementary (3)</b>	<b>— EDI 430 Student Teaching, Elementary (10)</b> EDI 430 seminar is also required <b>— EDF 485 The Context of Educational Issues (3)</b> Must be taken with or after EDI 430

### Guide for Declaring the Elementary Education Majors and Minor

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
4. Click on the down arrow in the box next to “New Major 1/Program,” from here scroll down and choose “Integrated Science-BS”
5. Click “Submit.” The system will automatically declare your second major in “Education” and minor in “Elementary Certification.” Click “Change to New Program.”

### General Education Overlap

<b>General Education Categories fulfilled by the Integrated Science Major for Elementary Education:</b>	
Physical Science with Lab: CHM 201 and PHY 201	Life Science with Lab: BIO 120
Mathematical Sciences: MTH 221	U.S. Diversity: EDF 315
Social and Behavioral Sciences: PSY 101	

### Teaching Majors and Minors for Elementary Teacher Certification at GVSU

#### Elementary Certification Majors – choose one

- Integrated Sciences
- Language Arts
- Mathematics
- Social Studies

#### Elementary Certification Minors

- Elementary Certification (required of all elementary certification students)
- Mathematics (may be added as a second minor)