

MATHEMATICS-EDUCATION 5-9 (STARTING IN MTH 124)

BACHELOR OF ARTS OR BACHELOR OF SCIENCE

THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.**Both your cumulative and major GPAs must be at least 2.7 to be registered for the Teacher Apprenticeship courses and corresponding field placement.**

Year One			
¹ MTH 124 Precalculus: Functions and Models ^{GE Math} Prereq: MTH 110, or math placement	5	¹ MTH 201 Calculus I ^{GE Math} Prereq: MTH 122 & 123, or MTH 124, or math placement	4
EDF 115 Intro to Education: An Exploration of Schooling in America. ^{GE Social/Behavioral}	3	¹ MTH 204 Linear Algebra I Prereq: MTH 122 & 123, or MTH 124, or math placement	3
² WRT 150 Gen Ed	4	Prerequisites: Gen Ed Foundations – Writing and MTH 201	
PSY 101 Introductory Psychology ^{GE Social/Behavioral}	3	PSY 331 Adolescent Development Prerequisite: PSY 101	3
		Gen Ed ^{GE Physical/Life Science no lab}	3
		Gen Ed ^{GE Philosophy and Literature}	3
<i>Total</i>	15	<i>Total</i>	16
Year Two			
MTH 202 Calculus II Prerequisite: MTH 201	4	MTH 323 Prob. & Stats for Elementary Teachers Prerequisite: MTH 226 or (MTH 210 and EDF 115)	3
³ MTH 210 SWS Communicating in Mathematics Prerequisites: Gen Ed Foundations – Writing and MTH 201	4	MTH 315 Discrete Mathematics Prerequisite: MTH 210	3
Gen Ed ^{GE Physical/Life Science with Lab}	4	EDR 225 Intro to Teaching Multilingual Learners ^{GE Cultures-GP}	3
Gen Ed ^{Arts}	3	⁴ Math theme elective	3
		MTH 331 Euclidean Geometry Prerequisites: MTH 210 and either MTH 204 or MTH 322	3
<i>Total</i>	15	<i>Total</i>	15
Year Three			
MTH 324 Algebraic Reasoning in Grades 3-9 Prerequisites: MTH 326 or (MTH 210 and one of MTH 229, 322, or 323)	3	MTH 329 Teaching Middle Grades Math Prerequisites: C or better in MTH 210 and MTH 324	3
⁴ Math theme elective	3	⁴ Math theme elective	3
³ EDF 260 SWS Educational Research & Assessment: Foundations of Practice ^{SWS}	3	EDF 315 Diverse Perspectives on Education ^{GE US Diversity}	3
Issues Gen Ed	3	Gen Ed ^{GE Historical Analysis}	3
MTH 322: Geometry for Elementary Teachers	3	MTH 495 The Nature of Modern Mathematics (Capstone) Prerequisites: MTH 204, 210, and at least four other 300-400 level	3
1 credit elective to reach 120 credits	1	OR MTH 496 Senior Thesis (Capstone) Prerequisites: 27 cr. in major, major GPA 3.0+, & permission of instructor	1
		1 credit elective to reach 120 credits	
<i>Total</i>	16	<i>Total</i>	16
Year Four - Teacher Preparation Professional Program			
⁵ Apprenticeship		Internship	
EDI 333 Secondary Teacher Apprenticeship and Sem: (5-9)	4	EDI 431/433/434 Secondary Teacher Internship	7
EDI 332 Secondary Apprenticeship Content Area Sem. (5-9) Corequisite: EDI 331, 333, 334, or 335	2	EDI 432 Secondary Internship Disciplinary Content Area Sem. Corequisite: EDI 431, 433, 434, or 435	2
³ EDR 321 SWS Content Area Literacy Corequisite: EDI 331, 333, 334, or 335	3	EDF 495 Reflective Inquiry and Practice Corequisite: EDI 430, 431, 433, 434, or 435	3
EDS 319 Universal Design for Learning Prerequisite: Junior standing	3		
EDT 477 Secondary Teaching with Technology ^{GE Issues}	3		
<i>Total</i>	15	<i>Total</i>	12

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

¹ Students must fulfill MTH 110, MTH 122, and MTH 123 or MTH 124 or waive the requirement through math placement. These courses do not count towards the completion of the Mathematics major² Students who self-place into WRT 120 should take this course in the fall and then WRT 130 in the winter of their first year. Students who self-place into WRT 150 can take in either semester during their first year. A grade of C or better is required in WRT 130 or 150 in order to satisfy the WRT requirement at GVSU.³ Students must complete a total of two courses with an SWS attribute. One SWS should be outside of the major.⁴ Mathematics Education-5-9 students must pick a math elective theme containing three courses. See below for options.⁵ Apprenticeship applications are due the previous semester. See: <https://www.gvsu.edu/education/undergraduate/apply-for-field-placement-4.htm>

It is imperative to meet with your CLAS and CECI faculty advisors 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>

Mathematics students can pursue a Bachelor of Arts or Bachelor of Science degree. Students who wish to obtain a BA must fulfill 3rd semester proficiency in a foreign language (201 level). The BS requirements are incorporated into the major requirements and include MTH 201, MTH 204, and MTH 210. To earn a degree from GVSU, all students must complete the following: 120 total credits, all major/minor requirements, all general education requirements, at least 58 credits from a 4-year institution, and the last 30 credits of the degree completed through GVSU.

Declaring the Mathematics and Secondary Education Major

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 "Mathematics Teaching-BA Education 5-9" **OR** "Mathematics Teaching-BS Education 5-9" depending on your degree
5. Click "Submit." The system will automatically declare your 2nd major in "Secondary Education"

General Education Categories fulfilled by the Mathematics - Education Majors for 5-9:	
Social and Behavioral Sciences: PSY 101, EDF 115	Issues: EDT 477
Mathematical Sciences: MTH 201	Cultures-U.S. Diversity: EDF 315
Cultures-Global Perspectives: EDR 225	

Second Major in Secondary Education (42 credits)

A 2.7 cumulative GPA in the Secondary Education Major Courses is required

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|--|---|
| — EDF 115 Introduction to Education (3) | — PSY 331 Adolescent Development (3) Prerequisite: PSY 101 |
| — EDR 225 Intro to Teaching Multilingual Learners (3) | |
| — EDF 315 Diverse Perspectives on Education (3) | *Must earn a B- or better |
| — EDF 260 Educational Research and Assessment (3)* | |

Apprenticeship (15 credits)

- **EDI 333** Secondary Teacher Apprenticeship (4)*
- **EDI 332** Secondary Teacher Apprenticeship Content Area Sem. (2)
- **EDR 321** Content Area Literacy (3)*
- **EDT 477** Teaching with Technology (3)*
- **EDS 319** Universal Design for Learning: Secondary (3)*

Internship (12 credits)

- **EDI 433** Secondary Teacher Internship (7)*
 - **EDI 432** Secondary Internship Content Area Seminar (2)
 - **EDF 495** Reflective Inquiry and Practice (3)*
- *Must earn a B- or better**

Application requirements for Teacher Apprenticeship and Teaching Internship experiences can be found at <https://www.gvsu.edu/education/undergraduate/apply-for-field-placement-4.htm> If you have any questions about the clinical experience applications, please contact the [Office of Certification and Accreditation](#) at (616) 331-6650 or email oca@gvsu.edu

Math Elective Themes (Choose one of the following)

Applied Theme	Calculus Theme	Math Education Theme
Take both of these: MTH 205 Linear Algebra II MTH 360 Operations Research Then choose <i>one</i> course from this list: MTH 229 Teaching High School Mathematics MTH 296 Introduction to Mathematical Research MTH 304 Analysis of Differential Equations* MTH 350 Modern Algebra I MTH 402 Complex Analysis* MTH 406 Linear Algebra III MTH 408 Real Analysis I* MTH 431 Non-Euclidean Geometry MTH 450 Modern Algebra I* MTH 495 Nature of Modern Math^ MTH 496 Senior Thesis^	Choose one: MTH 203 Calculus III or MTH 304 Analysis of Differential Equations* Then take a total of <i>two</i> more classes: Choose <i>at most one</i> course from this list: MTH 205 Linear Algebra II MTH 229 Teaching High School Mathematics MTH 296 Introduction to Mathematical Research MTH 304 Analysis of Differential Equations Choose <i>one or two</i> courses from this list: MTH 350 Modern Algebra I MTH 402 Complex Analysis* MTH 406 Linear Algebra III* MTH 408 Real Analysis I MTH 431 Non-Euclidean Geometry MTH 450 Modern Algebra I* MTH 495 Nature of Modern Math^ MTH 496 Senior Thesis^	Take this: MTH 226 Math for PK-6: Whole Numbers and Operations Then choose <i>one</i> course from this list: MTH 229 Teaching High School Mathematics MTH 326 Math for PK-6: Fractions, Decimals, and Proportional Reasoning And choose <i>one course</i> from this list: MTH 350 Modern Algebra I MTH 402 Complex Analysis* MTH 406 Linear Algebra III* MTH 408 Real Analysis I* MTH 431 Non-Euclidean Geometry MTH 450 Modern Algebra I* MTH 495 Nature of Modern Math^ MTH 496 Senior Thesis^

* This course has additional prerequisites

^ May only count if not taken as capstone

May be used with Unit Head Permission: MTH 380, 386, 387, 399, and 480