COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2023-2024

MATHEMATICS-SECONDARY EDUCATION (MTH 110 FULFILLED)

BACHELOR OF ARTS OR BACHELOR OF SCIENCE WITH A SECOND MAJOR IN EDUCATION & TEACHABLE MINOR REQUIRED

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 Mathematics major is required for admission to the Teacher Preparation Professional Program

Year One			
[1]**MTH 124** Precalculus: Functions and Models GE Math Prerequisite: MTH 110 or proficiency through math placement **SEE NOTE BELOW REGARDING OPTIONS FOR THIS COURSE**	5	[1]**MTH 201** Calculus I Prerequisites: MTH 122 and MTH 123, or MTH 124, or proficiency through math placement	4
[2]Gen Ed GE Art or WRT 120 (self-placement)	3	**MTH 204** Linear Algebra I Prerequisite: MTH 122 and 123, or MTH 124, or proficiency through math placement	3
Minor	3	**PSY 101** Introductory Psychology GE Social/Behavioral	3
Gen Ed GE Physical/Life Science with Lab	4	[2]**WRT 130 or 150** GE Writing	3/4
Total	*15*	*Total*	*13/14*
Year Two			
MTH 202 Calculus II Prerequisite: MTH 201	4	**MTH 203** Calculus III Prerequisite: MTH 202	4
STA 312 Probability and Statistics Prerequisite: MTH 201	3	[3]**MTH 210 SWS** Communicating in Mathematics Prerequisites: Gen Ed Foundations – Writing and MTH 201	4
PSY 301 Child Development Prerequisite: PSY 101	3	**EDF 315** Diverse Perspectives for Education GE US Diversity	3
Gen Ed GE Philosophy and Literature	3	Gen Ed GE Social/Behavioral	3
Minor	3		
Total	*16**	*Total*	*14*
Year Three			
MTH 315 Discrete Mathematics Prerequisite: MTH 210	3	**MTH 331** Euclidean Geometry Prerequisites: MTH 210 and either MTH 204 or MTH 322	3
MTH 229 Mathematical Activities for Secondary Teachers Prerequisites: MTH 201 or equivalent and sophomore standing	3	**MTH 329** Teaching Middle Grades Math Prerequisites: C or better in MTH 202, MTH 210, and one of the following: MTH 229, 322, 323, or 324, and Junior standing	3
EDI 339 Introduction to Assessment in Secondary Schools	3	Gen Ed GE Global Perspectives	3
[4]MTH Cognate Course	3	Gen Ed GE Physical/Life Science without Lab	3
Minor	3	Minor	3
Total	*15*	*Total*	*15*
Year Four			
MTH 350 Modern Algebra I Prerequisites: MTH 210, and either MTH 204 or MTH 225	3	[6]**MTH 495** The Nature of Modern Mathematics (Capstone) Prerequisites: MTH 204, MTH 210, MTH 350, and at least three other 300-400 level mathematics courses	3
[5]MTH Elective	3	***OR*** MTH 496 Senior Thesis	
Gen Ed GE Historical Analysis	3	(Capstone) Prerequisites: 27 credits in major, major GPA of 3.0 or better, and permission of instructor	
Issue	3	[7]**EDS 379** Universal Design for Learning: Secondary	3
Minor	3	Minor	3
		Minor	3
Total	*15*	*Total*	*12*
Teacher Preparation Professional Program			
Teacher Apprenticeship		**Student Teaching Internship**	
EDI 331 Methods and Strategies of Secondary Teaching	5	**EDI 431** Student Teaching: Secondary	8
EDI 310 Organizing and Managing Classroom Environments	3	**EDI 432** Student Teaching: Secondary Content	2
		EDF 485 The Context of Educational Issues Must be taken with or after EDI 431	3
[3]**EDR 321 SWS** Content Area Literacy	3		
EDT 476 (Teaching with Technology) GE Issues	3		
Total	*14*	*Total*	*13*

MTH 124 is designed for calculus-bound students as a replacement for MTH 122 & 123. While students can still fulfill the MTH 201 prerequisite by taking MTH 122 & 123, MTH 124 is strongly recommended for students who plan to major in mathematics.

* 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 major**

It is imperative to meet with your faculty advisor or 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

[2] Students who self-place into WRT 120 should take this course in the fall semester and then take WRT 130 in the winter semester 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-Secondary students must complete one Math Cognate Course. Options are listed below.

[5] Mathematics-Secondary students must complete one elective course in Math. Options are listed below.

[6] Students may also complete MTH 496 – Senior Thesis - as the capstone course. Consult with your mathematics faculty advisor to discuss these options.

[7] EDS 379 may be taken prior to the Teacher Apprenticeship semester but **must** be completed prior to the Student Teaching Internship. Please consult with your College of Education Advisor to determine an appropriate time to take this course.

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 202, and STA 312. 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 Education Major with Teachable 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 "Mathematics Teaching-BA Secondary Education" **OR** "Mathematics Teaching-BS Secondary Education" depending on your degree
5. Click "Submit." The system will automatically declare your 2nd major in "Education" and give you the option to declare a minor. Choose an appropriate minor from the list and then click "Change to New Program"

Teachable Minors for Secondary Education

Teachable Minors			
Applied Linguistics - ESL	Economics-Teaching	German-Teaching	Political Science-Teaching
Biology-Teaching	English-Teaching	History-Teaching	Psychology-Teaching
Chemistry-Teaching	French-Teaching	Physics-Teaching	Spanish-Secondary Teaching
Earth/Space Science-Teaching	Geography-Teaching		

General Education Categories fulfilled by the Mathematics Major for Secondary Education:	
Social and Behavioral Sciences: **PSY 101**	U.S. Diversity: **EDF 315**
Mathematical Sciences: **MTH 201**	Option of **HSC 201** for Historical Analysis
Option of **STA 345** for Issues	Issues: **EDT 476**

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)
- — **EDI 339 Introduction to Assessment in Secondary Schools** (3)
- — **PSY 301 Child Development** (3)
  Prerequisite: PSY 101
- — **EDS 379 Universal Design for Learning: Secondary** (3)
  (EDS 379 may be taken prior to the Teacher Assisting semester but **must** be completed prior to Student Teaching. Must earn a B- or better.)

Teacher Apprenticeship (14 credits)

- — **EDI 331 Methods and Strategies of Secondary Teaching** (5)
- — **EDI 310 Organizing and Managing Classroom Environments** (3)
- — **EDR 321 Content Area Literacy** (3)
- — **EDT 476 Teaching with Technology** (3)

Student Teaching Internship (13 credits)

- — **EDI 431 Student Teaching, Secondary** (8)
- — **EDI 432 Student Teaching, Secondary Content** (2)
- — **EDF 485 The Context of Educational Issues** (3)
  (Must be taken with or after EDI 431)

Mathematics Cognate Courses (Choose one of the following)

BIO 355 Human Genetics	**CMB 451** Bioinformatics	**PHI 203** Intermediate Logic
BIO 375 Genetics	**CMB 452** Computational Biology	**PHY 230** Principles of Physics I
CHM 351 Introduction to Physical Chemistry	**ECO 400** Econometrics and Forecasting	**PSY 300** Research Methods in Psychology
CIS 160 Learn to Code in Python	**GEO 470** Geophysics	**STA 314** Statistical Quality Methods
CIS 161 Computational Science	**HSC 201** The Scientific Revolution	**STA 345** Statistics in Sports
CIS 162 Computer Science I		**STA 412** Mathematical Statistics I
CIS 261 Structured Programming in C		

Math Elective Courses (Choose one of the following)

MTH 205 Linear Algebra II	**MTH 405** Numerical Analysis	**MTH 450** Modern Algebra I
MTH 300 Applied Analysis I	**MTH 408** Real Analysis I	**MTH 465** Automata and Theory of Computation
MTH 304 Analysis of Differential Equations	**MTH 409** Real Analysis II	**MTH 495** Nature of Modern Math (if MTH 496 is taken as capstone)
MTH 360 Operations Research	**MTH 431** Non-Euclidean Geometry	
MTH 401 Mathematics for the Physical Sciences	**MTH 441** Topology	**MTH 496** Senior Thesis (if MTH 495 is taken as capstone)
MTH 402 Complex Variables		

With Unit Head Permission: MTH 380, 386, 387, 399, and 480	Courses not applicable as Math electives are: MTH 302, 312, 322, 323, 324, 325

Admission requirements for Teacher Apprenticeship and Student 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.

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