

MATHEMATICS-SECONDARY EDUCATION (STARTING IN MTH 201)

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 College of Education

| Year One | | | | |
|--|-------|--|--------------|----|
| ¹ MTH 201 Calculus I Prerequisites: MTH 122 and MTH 123 or proficiency through math placement | 4 | MTH 202 Calculus II Prerequisite: MTH 201 | 4 | |
| ⁶ WRT 150 Strategies in Writing | 4 | ² MTH 210 SWS Communicating in Mathematics Prerequisites: WRT 150 and MTH 201 | 4 | |
| Gen Ed | 3 | PSY 101 Introductory Psychology | 3 | |
| Minor | 3 | Gen Ed or Minor Course | 3 | |
| EDF 100 Introduction to Education (optional – see below) | 2 | Elective | 1 | |
| <i>Total</i> | 14-16 | | <i>Total</i> | 15 |
| Year Two | | | | |
| MTH 203 Calculus III Prerequisite: MTH 202 | 4 | MTH 315 Discrete Mathematics (formerly MTH 345) Prerequisite: MTH 210 | 3 | |
| MTH 227 Linear Algebra I Prerequisite: MTH 202 | 3 | STA 312 Probability and Statistics Prerequisites: MTH 201 | 3 | |
| PSY 301 Child Development (Prerequisite: PSY 101) | 3 | EDI 337 Introduction to Learning and Assessment | 3 | |
| EDF 315 Diverse Perspectives for Education | 3 | Gen Ed | 3 | |
| Minor | 3 | Minor | 3 | |
| <i>Total</i> | 16 | | <i>Total</i> | 15 |
| Year Three | | | | |
| MTH 331 Euclidean Geometry (formerly MTH 341) Prerequisites: MTH 210 and either MTH 227 or MTH 322 | 3 | MTH 350 Modern Algebra I (formerly MTH 310) Prerequisites: MTH 210, and either MTH 225 or MTH 227 | 3 | |
| MTH 229 Mathematical Activities for Secondary Teachers Prerequisites: MTH 201 or equivalent and sophomore standing | 3 | ³ MTH Cognate Course | 3 | |
| Gen Ed | 3 | Gen Ed | 3 | |
| Gen Ed | 3 | Gen Ed | 3 | |
| Minor | 3 | Minor | 3 | |
| <i>Total</i> | 15 | | <i>Total</i> | 15 |
| Year Four | | | | |
| 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. Junior standing | 3 | ⁷ MTH 495 The Nature of Modern Mathematics (Capstone) Prerequisites: MTH 210, MTH 227, MTH 310, and at least three other 300-400 level mathematics courses | 3 | |
| ⁴ MTH Elective | 3 | ⁵ EDS 379 Universal Design for Learning: Secondary | 3 | |
| Gen Ed | 3 | Gen Ed | 3 | |
| Issue | 3 | Minor | 3 | |
| Minor | 3 | Minor | 3 | |
| <i>Total</i> | 15 | | <i>Total</i> | 15 |
| Teacher Preparation Professional Program | | | | |
| Teacher Assisting | | Student Teaching | | |
| EDI 331 Methods and Strategies of Secondary Teaching | 5 | EDI 431 Student Teaching: Secondary | 8 | |
| EDF 310 Organizing and Managing Classroom Environments | 3 | EDI 432 Student Teaching: Secondary Content | 2 | |
| ² EDR 321 SWS Content Area Literacy | 3 | EDF 485 The Context of Educational Issues | 3 | |
| EDT 370 Technology in Education Must be taken with or after EDI 331 but before EDI 431 | 3 | Must be taken with or after EDI 431 | | |
| <i>Total</i> | 14 | | <i>Total</i> | 13 |

* The block tuition rate is 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.**¹Students must fulfill MTH 110, MTH 122, and MTH 123 or waive the requirement through math placement. These courses do not count towards the completion of the Mathematics major.****²Students must complete a total of two courses with an SWS attribute.****³Mathematics-Secondary students must complete one Math Cognate Course. Options are listed on the back of this page.****⁴Mathematics-Secondary students must complete one elective course in Math. These electives are listed on the back of this page.****⁵EDS 379 may be taken prior to the Teacher Assisting semester but **must** be completed prior to Student Teaching. Please consult with your College of Education Advisor to determine an appropriate time to take this course.****⁶Students who self-place into WRT 098 should take this course in the fall semester and then take WRT 150 in the winter semester of the first year. Students who self-place into WRT 150 should take this course in the winter semester of the first year. A grade of C or higher is required to fulfill the WRT 150 requirement.****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.****Your academic advisor in the CLAS Academic Advising Center is Nick Woodward (woodwani@gvsu.edu)****Online at: <http://www.gvsu.edu/clasadvising>**

⁷Students may also complete MTH 496 – Senior Thesis - as the capstone requirement. Consult with your mathematics faculty advisor to discuss these options.

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.

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 Majors and Teachable Minors for Secondary Education

| Teachable Majors | Teachable Minors |
|---------------------|---------------------------------|
| Biology | Mathematics |
| Chemistry | Music (K-12) |
| Earth/Space Science | Physical Education (K-12) |
| English | Physics |
| French | Social Studies |
| German | Spanish |
| History | Visual Arts (K-12) |
| Latin | |
| | Biology-Teaching |
| | Chemistry-Teaching |
| | Computer Science-Teaching |
| | Earth/Space Science-Teaching |
| | Economics-Teaching |
| | English-Teaching |
| | French-Teaching |
| | Geography-Teaching |
| | German-Teaching |
| | History-Teaching |
| | Mathematics-Secondary Education |
| | Physical Education-Teaching |
| | Physics-Teaching |
| | Political Science-Teaching |
| | Psychology-Teaching |
| | School Health Education |
| | Spanish-Secondary Teaching |

General Education Overlap

| 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 | |

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

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|---|--|
| — EDF 315 Diverse Perspectives on Education (3) | — PSY 301 Child Development (3) |
| — EDI 337 Introduction to Learning and Assessment (3) | Prerequisite: PSY 101 |
| A 2.7 cumulative GPA in the Education Major Prerequisites is required with no grade lower than a C | |
| — EDI 331 Teacher Assisting-Secondary (5) | — EDS 379 Universal Design for Learning: Secondary (3) |
| — EDF 310 Organizing and Managing Classroom Environments (3) | (EDS 379 may be taken prior to the Teacher Assisting semester but must be completed prior to Student Teaching.) |

Teacher Assisting (14 credits)

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|--|
| — EDI 331 Teacher Assisting-Secondary (5) |
| — EDF 310 Organizing and Managing Classroom Environments (3) |
| — EDR 321 Content Area Literacy (3) |
| — EDT 370 Technology in Education (3) |
| (Must be taken with or after EDI 331 but before EDI 431) |

Student Teaching (13 credits)

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| — 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)

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|--|---|--|
| BIO 355 Human Genetics | CMB 452 Computational Biology | PHI 203 Intermediate Logic |
| BIO 375 Genetics | EGR/CIS 261 Structured Programming in C | PHY 230 Principles of Physics I |
| CHM 351 Introduction to Physical Chemistry | ECO 342 Strategic Games | PSY 300 Research Methods in Psychology |
| CIS 160 Programming with Visual Basic | ECO 400 Econometrics and Forecasting | STA 314 Statistical Quality Methods |
| CIS 161 Computational Science | ECO 412 Applied Mathematical Economics | STA 345 Statistics in Sports |
| CIS 162 Computer Science I | GEO 470 Geophysics | STA 412 Mathematical Statistics I |
| CMB 351 Bioinformatics | HSC 201 The Scientific Revolution | |

Math Elective Courses (Choose one of the following – must be at the 300 level or above)

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|--|--|---|
| MTH 300 Applied Analysis I | MTH 401 Math for the Physical Sciences | MTH 465 Automata and Theory of Computation |
| MTH 304 Analysis of Differential Equations | MTH 402 Complex Variables | MTH 480 Special Topics |
| MTH 327 Linear Algebra II | MTH 405 Numerical Analysis | MTH 490 Internship |
| MTH 360 Operations Research | MTH 408 Advanced Calculus I | MTH 495 Nature of Modern Math (if MTH 496 is taken as capstone) |
| MTH 380 Special Topics | MTH 409 Advanced Calculus II | MTH 496 Senior Thesis (if MTH 495 is taken as capstone) |
| MTH 386 Study Abroad in Math Education | MTH 410 Modern Algebra II | |
| MTH 387 Study Abroad in Mathematics | MTH 431 Non-Euclidean Geometry | |
| MTH 399 Independent Readings | MTH 441 Topology | |

Courses not applicable as Math electives are: MTH 302, 312, 322, 323, 324, 325.