COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2014-2015

MATHEMATICS -GENERAL (STARTING IN MTH 201)

BACHELOR OF ARTS OR BACHELOR OF SCIENCE DEGREE

THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

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
Gen Ed	4	[2]MTH 210 SWS Communicating in Mathematics Prerequisites: WRT 150 and MTH 201	4
[7]WRT 150 Strategies in Writing	4	Gen Ed	3
Gen Ed	3	Gen Ed	3
		[5]Elective	1
Total	*14-15*	*Total*	*15*
Year Two			
MTH 203 Calculus III Prerequisite: MTH 202	4	[3]MTH Cognate Course	3-4
MTH 227 Linear Algebra Prerequisite: MTH 202	3	[4]MTH Elective	3
[3]CIS 160 Programming with Visual Basic	3	Gen Ed	3
OR CIS 162 Computer Science I	4	Gen Ed	3
OR CIS/EGR 261 Structured Programming in C	3	[5]Elective	3
Gen Ed	3		
[5]Elective	2-3		
Total	*15-16**	*Total*	*15-16**
Year Three			
MTH 310 Modern Algebra Prerequisites: MTH 210 and MTH 225 or MTH 227	3	[6]MTH Sequence	3
[3]STA 312 Probability and Statistics Prerequisites: MTH 201	3	Issue	3
Gen Ed	3	Gen Ed	3
[5]Elective	3	[5]Elective	3
[5]Elective	3	[5]Elective	3
Total	*15*	*Total*	*15*
Year Four			
MTH 408 Advanced Calculus I Prerequisites: MTH 203 and MTH 210	3	[8]MTH 495: The Nature of Modern Mathematics Prerequisites: MTH 210, MTH 227, MTH 310, and at least one other 300-400 level mathematics courses	3
[4]MTH Elective or Cognate	3	[5]Elective	3
Issue	3	[5]Elective	3
[5]Elective	3	[5]Elective	3
[5]Elective	3	[5]Elective	3
Total	*15*	*Total*	*15*

* 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 waive the requirement through math placement. These courses do not count towards the completion of the Mathematics major.**

[2] Students must complete a total of two courses with an SWS attribute

[3] Mathematics students must complete three Math Cognate Courses. These courses are listed on the back of this guide.

[4] Mathematics students must complete a total of 11 courses in Math. These electives are listed on the back of this guide.

[5] Elective refers to any course to help you earn the required 120 credits to graduate.

[6] Mathematics students must complete a two course Math sequence. The sequence options are listed on the back of this guide.

[7] Students who self-place into WRT 098 should take this courser 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 Betty Schaner (schanerb@gvsu.edu)
Online at: http://www.gvsu.edu/clasadvising

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

Degree Requirements

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 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"
5. From here scroll down and find "Mathematics." There are two options BA or BS. Click on the option you prefer.
6. Click "Submit" and then click "Change to New Program"

General Education Overlap

General Education Categories fulfilled by the Mathematics Major:
Mathematical Sciences: MTH 201

Mathematics Cognate Courses		
Required	**Pick ONE of the following**	
CIS 160 Programming with Visual Basic	BIO 355 Human Genetics	GEO 470 Geophysics
Or	BIO 375 Genetics	HSC 201 The Scientific Revolution
CIS 162 Computer Science I	CHM 351 Introduction to Physical Chemistry	PHI 203 Intermediate Logic
Or	EGR/CIS 261 Structured Programming in C	PHY 230 Principles of Physics I
EGR 261 Structured Programming in C	ECO 342 Strategic games	PSY 300 Research Methods in Psychology
	ECO 400 Econometrics and Forecasting	STA 314 Statistical Quality Methods
And	EGR 304 Innovation	STA 412 Mathematical Statistics I
STA 312 Probability and Statistics	GEO 440 Geohydrology	

Choose ONE of the following two course sequences Some courses may overlap with required courses	
Modern Algebra — MTH 310 Modern Algebra (3) — MTH 410 Modern Algebra II (3)	Analysis and Topology — MTH 441 Topology (3) — MTH 408 Advanced Calculus I (3)
Advanced Calculus — MTH 408 Advanced Calculus I (3) — MTH 409 Advanced Calculus II (3)	Analysis with Application in Science — MTH 300 Applied Analysis I (3) — MTH 401 Mathematics for the Physical Sciences (4)
Geometry — MTH 341 Euclidean Geometry (3) — MTH 431 Non-Euclidean Geometry (3)	Connections to the Physical Sciences — MTH 304 Analysis of Differential Equations (3) — MTH 401 Mathematics for the Physical Sciences (4)
Linear Algebra and Applications — MTH 327 Linear Algebra II (3) — MTH 360 Operations Research (3)	Applied Mathematics — MTH 405 Numerical Analysis (3) — MTH 304 Analysis of Differential Equations (3)
Complex Analysis and Applications — MTH 402 Complex Variables (3) — MTH 304 Analysis of Differential Equations (3)	

Additional Courses Choose from the following list for a total of 11 courses in mathematics	
MTH 300 Applied Analysis I	MTH 402 Complex Variables
MTH 304 Analysis of Differential Equations	MTH 405 Numerical Analysis
MTH 227 Linear Algebra II	MTH 409 Advanced Calculus II
MTH 341 Euclidean Geometry	MTH 410 Modern Algebra II
MTH 345 Discrete Mathematics	MTH 431 Non-Euclidean Geometry
MTH 360 Operations Research	MTH 441 Topology
MTH 401 Mathematics for the Physical Sciences	MTH 465 Automata and Theory of Computation