

Mathematics**Bachelor of Arts Degree**

I.	Course Requirements for Major		
A.	Program Requirements		28 semester hours
1.	#MAT 174	Data Analysis and Statistics	3
2.	MAT 181	Calculus with Analytic Geometry I	4
3.	MAT 182	Calculus with Analytic Geometry II	4
4.	MAT 244	Statistical Analysis and Design	3
5.	MAT 260	Discrete Mathematics	3
6.	MAT 282	Differential Equations	4
7.	MAT 295	Sophomore Seminar I	1
8.	MAT 296	Sophomore Seminar II	1
9.	MAT 345	Linear Algebra	3
10.	MAT 396	Junior Seminar	1
11.	MAT 495	Senior Seminar I	1
B.	Areas of Specialization		
1.	Mathematics Educ: Elementary & Secondary		16-18 semester hours
	MAT 352	Geometry	3
	MAT 356	Math Modeling	3
	MAT 442	Introduction to Abstract Algebra	3
	MAT 460	Numerical Analysis	3
	Elementary Education		
	MAT 150	Math for Elementary Teachers I	2
	MAT 151	Math for Elementary Teachers II	2
	or		
	Secondary Education		
	MAT 292	Multivariable Calculus	4
	MAT 372	Secondary Math Methods	2
2.	Pure Mathematics		17 semester hours
	MAT 292	Multivariable Calculus	4
	MAT 442	Introduction to Abstract Algebra	3
	MAT 462	Introduction to Real Analysis	3
	MAT 485	Special Topics: Algebra II or Analysis II	3
	MAT 496	Senior Seminar II	1
	MAT ____	Electives (select one course from below)	3
		MAT 352 Geometry	
		MAT 356 Math Modeling	
		MAT 440 Probability and Statistics	
		MAT 460 Numerical Analysis	
C.	Cognate Requirements		13 semester hours
1.	CIS ____	Approved Programming Language	3
2.	BAM 201	Business Communications	
	or		3
	TSC 101	Fundamentals of Speech Communication	
3.	PHI 210	Symbolic Logic	3
4.	#PHY 141	General Physics I (Non-Calculus Based)	
	or		4
	#PHY 161	Physics I (Calculus Based)	
D.	Total for Major		57-59 semester hours

II.	Liberal Arts # May be double counted toward Major and Liberal Arts Requirements.	28 semester hours
III.	General Electives	33-35 semester hours
IV.	Total for Degree	120 semester hours
V.	Other Requirements <ol style="list-style-type: none"> 1. Mathematics Majors must earn a 2.1 grade point average in their major. 2. Mathematics majors must complete 4 courses in Mathematics at the 200-level or higher at Siena Heights, and the Junior/Senior Seminar series (MAT396/495 for those seeking education certification, or MAT396/495/496 for all others). 3. Students seeking teacher certification must also complete the appropriate math methods course. 	

Mathematics Minor

I.	Course Requirements for Minor	
A.	Program Requirements	25 semester hours
1.	#MAT 174 Data Analysis and Statistics	3
2.	MAT 181 Calculus with Analytic Geometry I	4
3.	MAT 182 Calculus with Analytic Geometry II	4
4.	MAT 260 Discrete Mathematics	3
5.	MAT 295 Sophomore Seminar I	1
6.	MAT 296 Sophomore Seminar II	1
7.	MAT 345 Linear Algebra	3
8.	MAT 356 Math Modeling	3
9.	MAT ____ Electives (select one course from below)	3-4
	MAT 244 Statistical Analysis and Design	
	MAT 282 Differential Equations	
	MAT 352 Geometry	
B.	Total for Minor # May be double counted toward Minor and Liberal Arts Requirements.	26 semester hours
II.	Other Requirements <ol style="list-style-type: none"> 1. Mathematics minors must complete a 9 hour residency at Siena Heights University. 	

Mathematics Minor (Secondary Education)

I.	Course Requirements for Minor	
A.	Program Requirements	25 semester hours
1.	#MAT 174 Data Analysis and Statistics	3
2.	MAT 181 Calculus with Analytic Geometry I	4
3.	MAT 182 Calculus with Analytic Geometry II	4
4.	MAT 260 Discrete Mathematics	3
5.	MAT 345 Linear Algebra	3
6.	MAT 352 Geometry	3
7.	MAT 356 Math Modeling	3
8.	MAT 372 Secondary Math Methods	2
B.	Total for Minor # May be double counted toward Minor and Liberal Arts Requirements.	25 semester hours

Mathematics Minor (Elementary Education)

- I. Course Requirements for Minor
- A. Program Requirements 26 semester hours
- | | | | |
|----|----------|---------------------------------|---|
| 1. | MAT 150 | Math for Elementary Teachers I | 2 |
| 2. | MAT 151 | Math for Elementary Teachers II | 2 |
| 3. | MAT 174 | Data Analysis and Statistics | 3 |
| 4. | #MAT 181 | Calculus with Analytic Geometry | 4 |
| 5. | MAT 244 | Statistical Analysis and Design | 3 |
| 6. | MAT 260 | Discrete Mathematics | 3 |
| 7. | MAT 345 | Linear Algebra | 3 |
| 8. | MAT 352 | Geometry | 3 |
| 9. | MAT 356 | Math Modeling | 3 |
- B. Total for Minor **26 semester hours**
May be double counted toward Minor and Liberal Arts Requirements.
- II. Other Requirements
1. Mathematics minors must earn a 2.1 grade point average in their minor.
 2. Mathematics minors must complete 3 courses (Minimum of 9 semester hours) in mathematics at the 200-level or higher at Siena Heights.

Applied Mathematics

Bachelor of Science Degree

I.	Course Requirements for Major		
A.	Program Requirements		45 semester hours
1.	#MAT 174	Data Analysis and Statistics	3
2.	MAT 181	Calculus with Analytic Geometry I	4
3.	MAT 182	Calculus with Analytic Geometry II	4
4.	MAT 244	Statistical Analysis and Design	3
5.	MAT 260	Discrete Mathematics	3
6.	MAT 282	Differential Equations	4
7.	MAT 292	Multivariable Calculus	4
8.	MAT 295	Sophomore Seminar I	1
9.	MAT 296	Sophomore Seminar II	1
10.	MAT 345	Linear Algebra	3
11.	MAT 356	Math Modeling	3
12.	MAT 396	Junior Seminar	1
13.	MAT 440	Probability and Statistics	3
14.	MAT 460	Numerical Analysis	3
15.	MAT 462	Introduction to Real Analysis	3
16.	MAT 495	Senior Seminar I	1
17.	MAT 496	Senior Seminar II	1
B.	Areas of Specialization (choose one)		
1.	Computer Science		21 semester hours
	CIS 218	Introduction to Information Systems	3
	CIS 340	JAVA Programming	3
	CIS 252	Introduction to C++	3
	CIS 353	Systems Analysis	3
	CIS 363	Database Management Systems	3
	CIS 460	Web Development Project	3
	CIS ____	Approved Elective	3
2.	Science		21 semester hours
	CHE 141	General Chemistry I	4
	CHE 142	General Chemistry II	4
	CIS 252	Introduction to C++	3
	ENG 211	Rhetoric	3
	ENG 212	Research	3
	PHY 262	Physics II (Calculus Based)	4
3.	Business		23 semester hours
	ACC 203	Principles of Accounting I	4
	ACC 240	Principles of Accounting II	4
	BAM 218	Introduction to Information Systems	3
	#ECO 221	Microeconomics	3
	ECO 222	Macroeconomics	3
	FIN 340	Principles of Managerial Finance	3
	MGT 302	Management Principles and Cases	3
C.	Cognate Requirements		13 semester hours
1.	CIS ____	Approved Programming Language	3
2.	BAM 201	Business Communications	
	or		3
	TSC 101	Fundamentals of Speech Communication	
3.	PHI 210	Symbolic Logic	3

4.	#PHY 141	General Physics I (Non-Calculus Based)	
	or		4
	#PHY 161	Physics I (Calculus Based)	
D.	Total for Major		79-81 semester hours
II.	Liberal Arts Core Requirements # May be double counted toward Major and Liberal Arts Requirements.		25-32 semester hours
III.	General Electives		7-16 semester hours
IV.	Total for Degree		120 semester hours
V.	Other Requirements		
1.	Mathematics majors must earn a 2.1 grade point average in their major.		