

## MATHEMATICS (NON-TEACHING)

### I. General Education Requirements

#### TOTAL REQUIRED FOR GENERAL EDUCATION REQUIREMENTS

Students should consult their assigned advisor when selecting any courses.

#### A. CURRICULUM AREA I - (ARTS AND HUMANITIES) 9 CREDITS

COURSE	No.	TITLE	CREDITS
ENGL	203	Fundamentals of Contemporary Speech	3
FREN	101	Fundamentals of French I and	3
FREN	102	Fundamentals of French II or	3
SPAN	101	Fundamentals of Spanish I and	3
SPAN	102	Fundamentals of Spanish II	3

#### B. CURRICULUM AREA II - (SOCIAL AND BEHAVIORAL SCIENCES) 6 CREDITS

Students must select one course in each of two disciplines

**SOCIAL SCIENCES:** ECON 201 or ECON 102H, or ECON 202 or ECON 202H,

GEOG 201 or GEOG 202, HIST 101 or HIST 111H,

HIST 102 or HIST 112H, POLI 200 or POLI 200H,

POLI 342, SOCI 101 or SOCI 111H

**BEHAVIORAL SCIENCES:** CRJS 101, HUEC 203, HUEC 220, HUEC 361, PSYC 100,

SOCI 201, SOWK 200 or SOEK 200H

#### C. CURRICULUM AREA III - (BIOLOGICAL AND PHYSICAL SCIENCES) 8 CREDITS

COURSE	No.	TITLE	CREDITS
BIOL	111	Principles of Biology I	3
BIOL	113	Principles of Biology I Lab	1
BIOL	112	Principles of Biology II	3
BIOL	114	Principles of Biology II Lab or	1
CHEM	111	Principles of Chemistry I	3
CHEM	113	Principles of Chemistry I Lab	1
CHEM	112	Principles of Chemistry II	3
CHEM	114	Principles of Chemistry II Lab	1

#### D. CURRICULUM AREA IV - (MATHEMATICS) 4 CREDITS

COURSE	No.	TITLE	CREDITS
MATH	112	Calculus and Analytic Geometry I	4

#### E. CURRICULUM AREA V - (ENGLISH COMPOSITION) 9 CREDITS

COURSE	No.	TITLE	CREDITS
ENGL	101	Basic Composition I or	3
ENGL	101H	Honors Basic Composition I	3
ENGL	102	Basic Composition II or	3
ENGL	102H	Honors Basic Composition II	3
ENGL	305/W	Technical Writing or	3
ENGL	310/W	Advanced Composition	3

#### F. CURRICULUM AREA VI - (EMERGING ISSUES) 4 CREDITS

COURSE	No.	TITLE	CREDITS
EXSC	111	Personal Health and Fitness	3
GNST	100	First Year Experience	1

### II. PROGRAM CORE REQUIREMENTS 43 CREDITS

COURSE	No.	TITLE	CREDITS
MATH	211	Calculus and Analytic Geometry II	4
MATH	212	Calculus and Analytic Geometry III	4
MATH	232	Introduction to Linear Algebra	3
MATH	309	Introduction to Probability	3
MATH	310	Mathematical Statistics I	3
MATH	321	Differential Equations	4
MATH	300	Foundations of Mathematics	3

MATH	342	Advanced Calculus	3
MATH	411	Modern Algebra	3
MATH	412	Linear Algebra	3
MATH	442	Complex Analysis	3
MATH	443	Real Analysis	3
MATH	490	Senior Seminar	1
CSDP	341	Numerical Analysis	3

**Major Electives**

**9 Credits**

Students should consult with their assigned advisor and select at least three additional courses according to their desired interest:

PURE MATHEMATICS CONCENTRATION				APPLIED MATHEMATICS CONCENTRATION			
COURSE	NO.	TITLE	CREDIT	COURSE	NO.	TITLE	CREDIT
MATH	301	College Geometry	3	MATH	302	Number Theory	3
MATH	302	Number Theory	3	MATH	350	Operations Research/Lin. Prog.	3
MATH	413	Modern Algebra II	3	MATH	410	Mathematical Statistics II	3
MATH	440	Topology	3	MATH	455	Mathematical Modeling	3
MATH	444	Real Analysis II	3	MATH	498	Topics in Math	3
MATH	498	Topics in Math. I	3	CSDP	442	Numerical Analysis II	3
CSDP	499	Undergraduate Research	3	CSDP	499	Undergraduate Research	3

Other 300 and 400 level courses in Mathematics and Computer Science may be substituted for some of these electives.

**III. SUPPORTIVE COURSE REQUIREMENTS**

**16 CREDITS**

COURSE	NO.	TITLE	CREDITS
PHYS	181H	Introductory Physics I (Honors)	3
PHYS	183H	Introductory Physics I (Honors) Lab	1
PHYS	182H	Introductory Physics II (Honors)	3
PHYS	184H	Introductory Physics II (Honors) Lab	1
CSDP	221	Introduction to Computer Programming Intensive	4
CSDP	222	Advanced Programming	4

**IV. FREE ELECTIVE COURSES**

**12 CREDITS**

It is advisable to take 300 and 400 upper level mathematics, computer science, engineering, and technology courses relevant to fields of interest.

**TOTAL PROGRAM REQUIREMENTS 120**

## RECOMMENDED CURRICULUM for MATHEMATICS (NON-TEACHING)

### Freshman Year

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 112	4	MATH 211	4
ENGL 101	3	ENGL 102	3
EXSC 111 <sup>1</sup>	3	GEN CURR AREA III <sup>2</sup>	3
GNST 100	1	GEN CURR AREA III <sup>3</sup>	1
GEN ED CURR AREA III <sup>2</sup>	3	CSDP 221	<u>4</u>
GEN ED CURR AREA III <sup>3</sup>	<u>1</u>		15
	15		

### Sophomore Year

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 212	4	MATH 321	4
ENGL 203	3	ENGL 305	3
CSDP 222	4	FREN 102 <b>or</b>	
FREN 101 <b>or</b>		SPAN 102	3
SPAN 101	3	GEN CURR AREA II <sup>4</sup>	3
MATH 300	<u>3</u>	MATH 232	<u>3</u>
	17		16

### Junior Year

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 342	3	MATH Elective	3
PHYS 181H	3	PHYS 182H	3
PHYS 183H	1	PHYS 184H	1
MATH 309	3	MATH 411	3
GEN CURR AREA II <sup>5</sup>	<u>3</u>	MATH 310	3
	13	Free Elective	<u>3</u>
			16

### Senior Year

<i>First Semester</i>	<i>Credit</i>	<i>Second Semester</i>	<i>Credit</i>
MATH 443	3	MATH 442	3
MATH 412	3	MATH 490	1
CSDP 341	3	MATH Elective	3
MATH Elective	3	Free Elective	3
Free Elective	<u>3</u>	Free Elective	<u>3</u>
	15		13

**Total Credits Hours: 120**

<sup>1</sup>Course cannot be repeated for credit.

<sup>2</sup>Student must select one science course from GEN ED CURR AREA III

<sup>3</sup>Student must select one science lab course from GEN ED CURR AREA III

<sup>4</sup>Student must select from GEN CURR AREA II: A

<sup>5</sup>Student must select from GEN CURR AREA II: B

