# **BS Mathematics - Traditional (Fall 2022 & Later)**

#### Minimum 120 credits required for Bachelor's degree Foundational Core (30-32 Credits) Grade FYWS 125 First Year Seminar CTL-125 Critical Thinking Foundational Math course XXXXX Choose 1 course from each area \* <sup>2</sup>Natural/Physical Science Literature HI-100 or HI-102 History Arts/Design/Comm. Philosophy Theology/Relig Social/Behavioral Science

## Human Journey Seminars: Great Books in CIT (6 Credits)

CIT 201	CIT Seminar I	
CIT 202	CIT Seminar II	

# **Liberal Arts Explorations (9 Credits Total)**

Student must complete one course in each area.				
Humanistic Inqu	uiry (3 credits)			
Social and Glob	pal Awareness (3 credits)			
Scientific Litera	cy (3 credits)			

Note: MA 006 and ESL courses will not count towards the 120 credit graduation requirement.

Approved Study Abroad courses may be used to satisfy requirements for the foundational core or a Liberal Arts Exploration

A maximum of 8 Applied Music credits may be applied towards graduation

# Required Curriculum for Degree in Major

MA 151	Calculus I	
MA 152	Calculus II	
MA 201	Introduction to LaTeX	
MA 253	Calculus III	
MA 261	Linear Algebra	
MA 301	Mathematical Structures and Proofs	
MA 362	Abstract Algebra	
MA 371	Real Analysis	
MA 398	Senior Seminar	
MA	One of MA 314, 318, 320, 325, 372	
MA	One of MA 254, 331, 332, 337, 341, 349	
MA	Mathematics Elective*	
MA	Mathematics Elective*	
*Mathema	atics electives must be at the 250-level or higher.	
Students	may not get credit for both MA 279 and MA 280.	
	1	

Grade

equire	ed Supporting Courses	Grade
Choose ONE of the following sequences:		
	Biology 111/113 & 112/114	
	Chemistry 151/153 & 152/154	
	Physics 151/153 & 152/154	
	Economics 202 & 203	
	Computer Science 111 & 112	
enera	I Electives (number of credits vary)	Grade
enera	l Electives (number of credits vary)	Grade
enera	l Electives (number of credits vary)	Grade
ienera	I Electives (number of credits vary)	Grade
Senera	I Electives (number of credits vary)	Grade
Genera	I Electives (number of credits vary)	Grade
Genera	I Electives (number of credits vary)	Grade
Genera	l Electives (number of credits vary)	Grade
Genera	l Electives (number of credits vary)	Grade
Genera	l Electives (number of credits vary)	Grade

#### Checksheet Ke

T Course transferred and Requirement satisfied

W Requirement waived

TW Course transferred and Requirement waived

<sup>\*</sup> See list of courses.

<sup>&</sup>lt;sup>1</sup>(Requires Grade C or higher)

<sup>&</sup>lt;sup>2</sup>Science/Natural Science courses includes approved Math and Computer Science courses. Students are required to take at least one course in Biology, Chemistry, or Physics in the Foundational or Liberal Arts Exploration Core.

CS and MA courses may be used as a Science/Natural Science in either the Foundational Core or as a requirement in the LAE Core but not in both categories.

# SACRED HEART UNIVERSITY College of Arts and Sciences

# **BS Mathematics - Traditional (Fall 2022 & Later)**

The Bachelor of Science program in Mathematics (Traditional) at Sacred Heart University is designed to prepare students for advanced studies or employement in areas where analytical and computational skills are in demand. The Mathematics curriculum was developed in accordance with the recommendations of the Committee on the Undergraduate Program in Mathematics of the Mathematical Association of America. It consists of courses which prepare our students for a variety of successful careers in finance, statistics, computer science, engineering, or education. The traditional concentration is ideal for students who plan to pursue a secondary education teaching certificate in mathematics, and for students who intend to pursue graduate studies in mathematics. The Mathematics major requires completion of 40 credits in Math plus a 6-8 credit sequence in a supporting discipline.

### SUGGESTED FOUR YEAR SEQUENCE OF STUDY:

YEAR 1	SEMESTER I	YEAR 1	SEMESTER 2
FYWS 125 or	First Year Seminar	FYWS 125 or	First Year Seminar or
CTL-125	Critical Thinking	CTL-125	Critical Thinking
MA 151	Calculus I	MA 152	Calculus II
	Foundational Core		Foundational Core
	Foundational Core		Foundational Core
	Foundational Core		Foundational Core
YEAR 2	SEMESTER 3	YEAR 2	SEMESTER 4
MA 253	Calculus III	MA 261	Linear Algebra
MA 201	Introduction to LaTeX	MA 301	Mathematical Structures and Proofs
CIT 201	Catholic Intellectual Tradition Seminar I	CIT 202	Catholic Intellectual Tradition Seminar II
	Foundational Core		Liberal Arts Exploration
	Liberal Arts Exploration		Free Elective
	Liberal Arts Exploration		
YEAR 3	SEMESTER 5	YEAR 3	SEMESTER 6
MA 371	Real Analysis	MA 362	Abstract Algebra
MA	Mathematics Elective	MA	Mathematics Elective
	Required Supporting Course		Required Supporting Course
	Free Elective		Free Elective
	Free Elective		Free Elective
YEAR 4	SEMESTER 7	YEAR 4	SEMESTER 8
MA 398	Senior Seminar in Mathematics	MA	Mathematics Elective
MA	Mathematics Elective		Free Elective
	Free Elective		Free Elective
	Free Elective		Free Elective
	Free Elective		Free Elective

Note: Foundational Core should be completed by the end of sophomore year.