# BS Mathematics- Actuarial Science (Fall 2024 & Later)

**Minimum 120 credits required for Bachelor's degree**

| **Foundational Core (27-29 Credits)** | | **Grade** |
|---|---|---|
| FYWS-125[1] | First Year Seminar | |
| MA ____ | Foundational Core Math cou | xxxx |
| Choose 1 course from each area * | | |
| [2]Natural/Physical Science | | |
| Literature | | |
| History | HI-100, HI-102 or HI-110 | |
| 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 (LAE) (12 Credits Total)**

| **Student must complete 4 courses from at least 2 different subjects and one course in each area. (see list on Registrar's Website - checksheets)** | | |
|---|---|---|
| Humanistic Inquiry (3 credits) | | |
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| | | |
| Social and Global Awareness (3 credits) | | |
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| Scientific Literacy (3 credits) | | |
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| LAE in any area (3 credits) | | |
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* See list of courses.

[1](Requires Grade C or higher)

[2]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.

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**

| | | **Grade** |
|---|---|---|
| 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 331 | Probability | |
| MA 332 | Mathematical Statistics | |
| MA 349 | Actuarial Mathematics | |
| MA 398 | Senior Seminar | |
| | **Two of the following: At least one of which is MA 362 or 371** | |
| MA __ | Pure electives: | |
| MA __ | MA 314, 318, 320, 325, 362, 371, 372 | |
| | | |
| | | |
| * Mathematics electives must be at the 250-level or above. Students may not earn credit for both MA 279 and MA 280 | | |
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| | | |

| **Required Supporting courses** | | **Grade** |
|---|---|---|
| EC 202 | Principles of Microeconomics | |
| EC 203 | Principles of Macroeconomics | |
| AC 221 | Financial Accounting and Reporting | |
| FN 215 | Financial Management | |
| FN 442 | Derivatives and Risk Management | |
| | | |
| | | |

| **General Electives (number of credits vary)** | | **Grade** |
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**Checksheet Key**

| | |
|---|---|
| T | Course transferred and Requirement satisfied |
| W | Requirement waived |
| TW | Course transferred and Requirement waived |

# SACRED HEART UNIVERSITY

## College of Arts and Sciences

## BS Mathematics- Actuarial Science (Fall 2024 & Later)

The Bachelor of Science program in Mathematics, Actuaruial Science Concentration, at Sacred Heart University is designed to prepare students for a career as an actuary. Students will be prepared to take two actuarial exams (Exams P and FM) by the time of graduation, and have preparation for additional exams. Sacred Heart University is recognized by the Society of Actuaries as a UCAP-IC Institution. Further, our courses MA 332, EC 202, EC 203, AC 221, and FN 215 are recognized by the Society of Actuaries as VEE approved courses.

***SUGGESTED FOUR YEAR SEQUENCE OF STUDY:***

| YEAR 1 | SEMESTER I | YEAR 1 | SEMESTER 2 |
|---|---|---|---|
| FYWS 125 | First Year Writing Seminar | MA152 | Calculus II |
| MA151 | Calculus I | AC 221 | Financial Accounting and Reporting |
| | Foundational Core | | Foundational Core |
| | Foundational Core | | Foundational Core |
| | Foundational Core | | Liberal Arts Explorations |

| YEAR 2 | SEMESTER 3 | YEAR 2 | SEMESTER 4 |
|---|---|---|---|
| MA 253 | Calculus III | MA 261 | Linear Algebra |
| MA 201 | Introduction to LaTeX | MA __ | Mathematics Elective (pure) |
| MA 301 | Mathematical Structures and Proofs | CIT 202 | Catholic Intellectual Tradition Seminar II |
| EC 202 | Principles of Microeconomics (Social/Behavorial Fundmental Core) | EC 203 | Principles of Macroeconomics (LAE Social and Global Awareness) |
| CIT 201 | Catholic Intellectual Tradition Seminar I | | Liberal Arts Explorations |
| | Foundational Core | | |

| YEAR 3 | SEMESTER 5 | | YEAR 3 | SEMESTER 6 |
|---|---|---|---|---|
| MA 371 | Real Analysis | **<--OR-->** | MA 362 | Abstract Algebra |
| MA 331 | Probability | | MA 332 | Mathematical Statistics |
| FN 215 | Financial Management | | MA 349 | Acturial Mathematics |
| | Liberal Arts Explorations | | | Free Elective |
| | Free Elective | | | Free Elective |

| YEAR 4 | SEMESTER 7 | YEAR 4 | SEMESTER 8 |
|---|---|---|---|
| MA 398 | Senior Seminar in Mathematics | FN 442 | Derivatives and Risk Management |
| | Free 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 Junior year**.