

**2003-05 Catalog Paradigm  
Mathematics**

<b>First Year</b>	
1.	MT131 or MT132 (GS8)
2.	MT132 or MT233
3.	CS110
4.	General Education
5.	General Education
6.	General Education
7.	Elective/Minor
8.	Elective/Minor

<b>Second Year</b>	
1.	MT233
2.	MT250 (2 <sup>nd</sup> semester)
3.	General Education
4.	General Education
5.	General Education
6.	General Education
7.	Elective/Minor
8.	Elective/Minor

<b>Third Year</b>	
1.	MT300 or above
2.	MT300 or above
3.	MT300 or above
4.	General Education
5.	General Education
6.	Elective/Minor
7.	Elective/Minor
8.	Elective/Minor

<b>Fourth Year</b>	
1.	MT300 or above
2.	MT300 or above
3.	MT499 (non credit) (2 <sup>nd</sup> semester)
4.	General Education
5.	General Education
6.	Elective/Minor
7.	Elective/Minor
8.	Elective/Minor
9.	Elective/Minor

Elective/Minor courses can be used to take additional major courses, free electives, or to fulfill a minor.

## Progress Sheet Mathematics

Student Name: _____  Student ID: _____	
<b>General Education – Lower Biennium</b>	<b>Major</b>
<input type="checkbox"/> <b>GS1</b> – Religious Studies _____ <input type="checkbox"/> <b>GS2</b> – Philosophy of Human Nature _____ <input type="checkbox"/> <b>GS3</b> – Human Relationships _____ <input type="checkbox"/> <b>GS4</b> – Natural Science _____ <input type="checkbox"/> <b>GS5</b> – Creative Expression _____ <input type="checkbox"/> <b>GS6</b> – United States Heritage _____ <input type="checkbox"/> <b>GS7</b> – Foreign Heritages _____ <input type="checkbox"/> <b>GS8</b> – Quantitative Skills _____ <input type="checkbox"/> <b>GS9</b> – Writing _____ _____	<b>Required Courses:</b> <input type="checkbox"/> CS110 – Introduction to Computer Programming  <input type="checkbox"/> MT131 (or 124) – Calculus and Analytic Geometry I (or Survey of Calculus)  <input type="checkbox"/> MT132 – Calculus and Analytic Geometry II  <input type="checkbox"/> MT233 – Calculus and Analytic Geometry III  <input type="checkbox"/> MT250 – Advanced Foundations of Mathematics  <input type="checkbox"/> MT499 – Senior Examination  5 Math courses numbered 300 or above. CS 323 is included as a math course in this requirement. At least one must be from MT303, 306, 373, or 376. <input type="checkbox"/> MT300 or above _____  <input type="checkbox"/> MT300 or above _____  <input type="checkbox"/> MT300 or above _____  <input type="checkbox"/> MT300 or above _____  <input type="checkbox"/> MT300 or above _____  <input type="checkbox"/> MT300 or above _____  .
<b>General Education – Upper Biennium</b>	
<input type="checkbox"/> <b>GS1</b> – Religious Studies _____ <input type="checkbox"/> <b>GS10</b> – Western Tradition _____ <input type="checkbox"/> <b>GS11</b> – Global Society _____ <input type="checkbox"/> <b>GS12</b> – Senior Colloquium (GS400) _____ _____	Note – Note – it is recommended that math majors take courses in at least one area where mathematics is applied; for example, computer science, physics, economics, or business administration.  MT499 is a noncredit course required of all math majors in their senior year

## Mathematics (MATH)

The mathematics program is designed to be personally and intellectually challenging and to have three objectives: 1) to introduce students to the methodology and applications of mathematics; 2) to provide students in all disciplines with the mathematical competency required in their studies; and 3) to train professional mathematicians for graduate school, teaching, or other careers. Check out our web site at <http://www.snc.edu/math> to obtain more information about the major program and the many activities in which mathematics majors participate.

### Outcomes of the Major Program

1. Each student should have a firm grounding in calculus, set theory, logic, and strategies of mathematical proof and problem solving.
2. Each student should have a working knowledge of at least five of the following mathematical areas: linear algebra, abstract algebra, differential equations, numerical analysis, operations research, probability and statistics, modern geometry, real analysis, and complex analysis. The precise combination of areas will depend on the student's particular interests and career objectives.
3. Each student should understand the connections and the differences between pure and applied mathematics. Students should be able to reason rigorously in mathematical arguments, and students should be able to use mathematical models and algorithms to solve problems.
4. Each student should master the language, symbology, and form used in mathematical proof and develop the ability to communicate mathematics clearly.
5. Each student should develop the ability to use technology to reason numerically, symbolically, graphically, and verbally. Students should be able to write computer programs or use appropriate software to solve mathematical problems.
6. Each student should develop the ability to be a self-learner in mathematics in order to maximize the student's future success as a professional mathematician, an actuary, a high school teacher, a computer scientist, etc.

**Graduate School Advisor:** Dr. Richard Poss

**Pre-Actuarial Advisor:** Dr. Gene DeBoth and Dr. Richard Poss

**Major (10 courses plus MATH 499):** CSCI 110, MATH 131 (or MATH 124), MATH 132, MATH 233, MATH 250, MATH 499, plus at least five additional mathematics courses numbered 300 or above. At least one of these five courses must be MATH 303, MATH 306, MATH 373, or MATH 376. For the mathematics major, CSCI 323 will count as a mathematics course numbered 300 or above. The major receives a Bachelor of Arts degree.

It is recommended that students majoring in mathematics take courses in at least one area where mathematics is applied; for example, computer science, physics, economics or business administration.

**Teaching Major:** For secondary teaching, the program shall consist of CSCI 110, MATH 131 (or MATH 124), MATH 132, MATH 233, MATH 250, MATH 306, MATH 321, MATH 350, MATH 499, plus at least two additional mathematics courses numbered 300 or above.

**Academic Minor (6 courses):** MATH 131 (or MATH 124), MATH 132, MATH 233, MATH 250, and two mathematics courses numbered 300 or above.

**Teaching Minor:** The program shall consist of CSCI 110, MATH 131 (or MATH 124), MATH 132, MATH 250, MATH 306, and MATH 321 or MATH 350.

**Residency Requirements:** Students majoring in mathematics (including the teaching major) must take MATH 499 and earn credit in at least three mathematics courses at St. Norbert College which are numbered 300 or above.