2003-05 Catalog Paradigm
Computer Science

First Year	
1.	CS110 (1st semester)
2.	CS205 (2nd semester)
3.	MT131 (1st semester) (GS8)
4.	MT132 (2nd semester)
5.	General Education
6.	General Education
7.	General Education
8.	General Education

Second Year	
1.	CS225 (1st semester)
2.	CS220 (2nd semester)
3.	MT250 (2nd semester)
4.	General Education
5.	General Education
6.	General Education
7.	Elective/Minor
8.	Elective/Minor

Third Year	
1.	CS322 (1st semester)
2.	CS370 (2nd semester)
3.	CS Application
4.	General Education
5.	General Education
6.	Elective/Minor
7.	Elective/Minor
8.	Elective/Minor

Fourth Year	
1.	CS321 or 323 (1st semester)
2.	CS460 (2nd semester)
3.	General Education
4.	General Education
5.	Elective/Minor
6.	Elective/Minor
7.	Elective/Minor
8.	Elective/Minor

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

1. Majors must take at least one CS Application course selected from the applications group listed in the catalog. These courses can be taken anytime after successfully completing the prerequisite.
2. Students considering graduate school should consult with a computer science faculty member.
3. For detailed information about course offerings, a check sheet, and prerequisites, go to **http://www.snc.edu/compsci** and choose **programs**.

June, 2004

Progress Sheet
Computer Science

Student Name:

Student ID:

General Education – Lower Biennium

☐ **GS1** – Religious Studies

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☐ **GS2** – Philosophy of Human Nature

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☐ **GS3** – Human Relationships

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☐ **GS4** – Natural Science

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☐ **GS5** – Creative Expression

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☐ **GS6** – United States Heritage

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☐ **GS7** – Foreign Heritages

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☐ **GS8** – Quantitative Skills

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☐ **GS9** – Writing

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General Education – Upper Biennium

☐ **GS1** – Religious Studies

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☐ **GS10** – Western Tradition

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☐ **GS11** – Global Society

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☐ **GS12** – Senior Colloquium (GS400)

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Major

Required Courses:

- ☐ CS110 – Introduction to Computer Programming
- ☐ CS205 – Software and Elementary Data Structures
- ☐ CS220 – Advanced Data and File Structures
- ☐ CS225 – Machine Organization and Assembly Language
- ☐ CS322 – Programming Languages
- ☐ CS370 – Introduction to Operating Systems
- ☐ CS460 – Senior Capstone Experience in Computer Science
- ☐ MT131 – Calculus and Analytic Geometry I
- ☐ MT132 – Calculus and Analytic Geometry II
- ☐ MT250 – Advanced Foundations of Mathematics

Theory Electives (at least one theory elective must be completed).

- ☐ CS321 – Analysis of Algorithms
- ☐ CS323 – Theory of Computation

Application Electives (at least one application elective must be completed).

- ☐ CS330 – Database Techniques and Modeling
- ☐ CS340 – Artificial Intelligence
- ☐ CS347 – Robotics and Real-Time Processing
- ☐ CS350 – Event and Windows Programming
- ☐ CS373 – Communication/Networks
- ☐ CS450 – Special Topics
- ☐ CS495 – Independent Study

Note –

1. Majors must take at least one CS APPL course selected from the applications group listed in the catalog. These courses can be taken anytime after successfully completing the prerequisite.
2. Students considering graduate school should consult with a computer science faculty member.
3. For detailed information about course offerings, a check sheet, and prerequisites, go to **http://www.snc.edu/compsci** and choose **programs**.

June, 2004

Computer Science (CSCI)

Computer science is primarily concerned with the study of algorithms. An algorithm is a sequence of unambiguous steps that performs a task. Computer hardware and software are developed to test and implement algorithms. So, computer science involves problem solving using computer algorithms. The scope of the discipline is broad, drawing from mathematics, engineering, business administration, psychology, linguistics, and others.

The Computer Science Discipline is committed to providing a program that is intellectually challenging, preparing graduates to understand both the fundamental concepts in computing as well as the computing profession within the context of a larger society. The Discipline recognizes the need to develop an awareness of the cultural, social, legal, and ethical issues inherent in the discipline of computing. The computer science program challenges students to share the values found in computing professions.

The purpose of the computer science major is to prepare students for a career in computing grounded in the liberal arts, providing a foundation for life-long learning through professional development and/or graduate study.

The objectives of the computer science program are to provide students with a thorough introduction to the theory and applications of computer science. The major is consistent with the ACM recommendations for a liberal arts program. It emphasizes both oral and written communication skills by requiring internal and external program documentation, topical papers, and presentations. Logical thinking and problem-solving is emphasized and attention is given to concepts that allow students to adapt to changing computing environments. Structured laboratory work reinforces mastery of concepts and their applications to real-world problems. Laboratories help students develop techniques and methodologies for experimentation and modeling.

Students work in a networked environment that links various types of personal computers to several servers. A large UNIX server is dedicated for computer science courses and student/faculty research projects. The Discipline also maintains a small Linux network and an experimental robotics laboratory.

Students interested in computer science have a choice of three formal programs: a major in computer science, a major in computer information systems, or a minor in computer science which can be combined with any other major. See the computer science web page for more information: http://www/snc/edu/compsci.

Residency requirements: Students majoring in computer science must earn credit in CSCI 460 and at least three computer science (CSCI) courses at St. Norbert College which are numbered 300 or above. Students minoring in computer science must earn credit in at least three computer science (CSCI) courses at St. Norbert College.

Graduate School Advisor: Dr. Bonnie McVey
Computer Information Systems Major: Refer to CIS section of the Catalog for curriculum requirements.

Computer Science Major (12 courses):
Mathematics: (3 courses)
MATH 131 Calculus I, MATH 132 Calculus II, and MATH 250 Advanced Foundations of Mathematics
Computer Science: (9 courses)
Introductory: (2 courses)

CSCI 110 Introduction to Computer Programming, CSCI 205 Software Engineering and Elementary Data
Structures
Core: (4 courses)
CSCI 220 Advanced Data and File Structures ,CSCI 225 Machine Organization and Assembly Language,
CSCI 322 Programming Languages, and CSCI 370 Introduction to Operating Systems
Theory Group: (1 course)
CSCI 321 Analysis of Algorithms or CSCI 323 Theory of Computation
Application Group: (1 course)
CSCI 330 Database Techniques and Modeling, CSCI 340 Artificial Intelligence, CSCI 347 Robotics and Real-Time
Processing, CSCI 350 Event & Windows Programming, or CSCI 373 Communication/Networks
Capstone: (1 course)
CSCI 460 Senior Capstone Experience in Computer Science
Computer Science Minor (7 courses): CSCI 110, CSCI 205, CSCI 220, CSCI 225, MATH 131 (or MATH 124),
and two courses chosen from the following: any CSCI course 200 or above, MATH 315, and BUAD 445.