Program & Curriculum Approval
Executive Summary

Program Title: Computer Science B.A.

Approval Status: Proposal Not Submitted
Program Last Saved: Sep 28, 2006 10:20:36 AM
By: Michael Korth

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General Information

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Campus:	University of Minnesota, Morris	*<no change>*
Career:	Undergraduate	*<no change>*
Program type:	Baccalaureate	*<no change>*
Program title (short):	Computer Science B.A.	*<no change>*
Program title (long):	Computer Science B.A.	*<no change>*
Program short description:	Compt Sci	*<no change>*
Additional terms:	· This program is 8 semesters (4 years) long. · This program does not need any summer terms.	*<no change>*
Stakeholder college(s):	· UMM-Science & Math, Div of	*<no change>*
Degree-granting college(s):	· UMM-Science & Math, Div of	*<no change>*
Approver college(s):	· UMM-Science & Math, Div of	*<no change>*
Administrative college(s):	· UMM-Science & Math, Div of	*<no change>*
Budgetary college(s):	· 'UMM-Science & Math, Div of'=100	*<no change>*
Acad plan code(s):	· 'UMM-Science & Math, Div of'=019620227	*<no change>*
Department(s):	· Division of Science & Mathematics - Adm	*<no change>*
First term admitting students:	Fall 1960	*<no change>*
Effective date:	Fall 2005	Fall 2007
Degree:	Bachelor of Arts	*<no change>*
Catalog description:	The computer science curriculum is designed to provide students with a strong foundation in the diverse and rapidly changing field of computing. The science of computing is emphasized with a focus on fundamental principles and the formal underpinnings of the field. Students are encouraged to use and supplement their formal education through a variety of research opportunities, participation in discipline colloquia and student/professional organizations, and pursuit of internship experiences or international studies opportunities. Students who successfully complete the major are qualified to enter the	Objectives - The computer science curriculum is designed to provide students with a strong foundation in the diverse and rapidly changing field of computing. The science of computing is emphasized with a focus on fundamental principles and the formal underpinnings of the field. Students are encouraged to use and supplement their formal education through a variety of research opportunities, participation in discipline colloquia and student/professional organizations, and pursuit of internship experiences or international studies opportunities. Students who successfully complete the major are qualified to enter the

	computing field as professionals or to pursue graduate studies.	computing field as professionals or to pursue graduate studies. Elective courses: Computer science major electives are divided into three areas: Systems courses (CSci 44xx), Theory courses (CSci 45xx), and Programming and Languages courses (CSci 46xx). The discipline offers an array of courses in each area. The courses listed in this bulletin are representative of the courses offered. New courses are continually developed and added to keep up with changes in the field.
RIASEC codes:		*<no change>*
Field of study:	Math, Engineering, and Science	*<no change>*
Program contact(s):	**U of M internet ID:** fordcj **Name:** Carol Ford **E-mail address:** fordcj@umn.edu **Telephone number:** 320/589-6300 **Campus mailing address:** UMM Div of Science and Math, RM 2550 Sci, M242A, 600 E 4th St, Morris, MN 56267	*<no change>*

Narrative Materials

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Admission Requirements

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Program Requirements

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Program length in credits:	120 credits	*<no change>*
Major length in credits:	60 credits	*<no change>*
Number of semesters of a second language that are required:	2	0
Specific language(s) required:	Any Second Language	No Second Language
Other requirements:		No more than two courses with a grade of D or D+, offset by an equivalent number of credits of A or B grades, may be used to meet the requirements for a computer science major. The GPA in these courses must be at least 2.00
Required course(s):	**Major Core Curriculum** CSCI 1301 - Problem Solving and Algorithm Development I, M/SR (4.0 cr) CSCI 1302 - Problem Solving and Algorithm Development II, M/SR (4.0 cr) CSCI 2101 - Data Structures, M/SR (5.0 cr) CSCI 2901 - Seminar I (1.0 cr) CSCI 3401 - Models of Computing Systems, M/SR (5.0 cr) CSCI 3501 - Algorithms and Computability, M/SR (5.0 cr)	**Required Courses** CSCI 1301 - Problem Solving and Algorithm Development I, M/SR (4.0 cr) CSCI 1302 - Problem Solving and Algorithm Development II, M/SR (4.0 cr) CSCI 2101 - Data Structures, M/SR (5.0 cr) CSCI 2901 - Seminar I (1.0 cr) CSCI 3401 - Models of Computing Systems, M/SR (5.0 cr) CSCI 3501 - Algorithms and Computability, M/SR (5.0 cr)

CSCI 3601 - Software Design and Development, M/SR (5.0 cr)
CSCI 4901 - Seminar II (1.0 cr)

Computer Science Electives
Take 10 or more credit(s) including 3 or more sub-requirement(s) from the following:
- *Take 2 - 4 credit(s) from the following:*
  - CSCI 4401 - Systems: Modern Databases, M/SR (2.0 cr)
  - CSCI 4402 - Systems: TCP/IP Networks, M/SR (2.0 cr)
  - CSCI 4404 - Systems: Parallel Systems, M/SR (2.0 cr)
  - CSCI 4405 - Systems: Computer Architecture and Organization, M/SR (2.0 cr)
  - CSCI 4406 - Systems: Wireless Data Networks, M/SR (2.0 cr)
  - CSCI 4451 - Systems: Distributed Systems, M/SR (4.0 cr)
  - CSCI 4452 - Systems: Computer Networks, M/SR (4.0 cr)
  - CSCI 4453 - Systems: Database Systems, M/SR (4.0 cr)
  - CSCI 4454 - Systems: Robotics, M/SR (4.0 cr)
- *Take 2 - 4 credit(s) from the following:*
  - CSCI 4501 - Theory: 3D Modeling, M/SR (2.0 cr)
  - CSCI 4503 - Theory: An Introduction to Intelligent Agent Theory, M/SR (2.0 cr)
  - CSCI 4507 - Theory: Data Compression, M/SR (2.0 cr)
  - CSCI 4552 - Theory: Advanced Algorithms, M/SR (4.0 cr)
  - CSCI 4554 - Theory: Cryptography, M/SR (4.0 cr)
  - CSCI 4555 - Theory: Neural Networks and Machine Learning, M/SR (4.0 cr)
- *Take 2 - 4 credit(s) from the following:*
  - CSCI 4602 - Programming and Languages: Embedded Systems, M/SR (2.0 cr)
  - CSCI 4605 - Programming and Languages: Refactoring, M/SR (2.0 cr)
  - CSCI 4606 - Programming and Languages: Client/Server Programming, M/SR (2.0 cr)
  - CSCI 4651 - Programming and Languages: Programming Languages, M/SR (4.0 cr)
  - CSCI 4652 - Programming and Languages: Compilers, M/SR (4.0 cr)
  - CSCI 4653 - Programming and Languages: Software Engineering, M/SR (4.0 cr)
  - CSCI 4656 - Programming and Languages: Human-Computer Interaction and Interface Design, M/SR (4.0 cr)

CSCI 3601 - Software Design and Development, M/SR (5.0 cr)
CSCI 4901 - Seminar II (1.0 cr)

Elective Courses
Take 10 or more credit(s) including exactly 3 sub-requirement(s) from the following:
- **Computing Systems Courses (44xx):**

Take 2 - 4 credit(s) from the following:
  - CSCI 4403 - Systems: Data Mining, M/SR (2.0 cr)
  - CSCI 4406 - Systems: Wireless Data Networks, M/SR (2.0 cr)
  - CSCI 4408 - Systems: Computer Forensics, M/SR (2.0 cr)
  - CSCI 4451 - Systems: Distributed Systems, M/SR (4.0 cr)
  - CSCI 4452 - Systems: Computer Networks, M/SR (4.0 cr)
  - CSCI 4453 - Systems: Database Systems, M/SR (4.0 cr)
  - CSCI 4454 - Systems: Robotics, M/SR (4.0 cr)
  - CSCI 4456 - Systems: Advanced Operating Systems, M/SR (4.0 cr)
- **Theory Courses (45xx):**

Take 2 - 4 credit(s) from the following:
  - CSCI 4506 - Theory: Fuzzy Logic and Fuzzy Sets, M/SR (2.0 cr)
  - CSCI 4507 - Theory: Data Compression, M/SR (2.0 cr)
  - CSCI 4552 - Theory: Advanced Algorithms, M/SR (4.0 cr)
  - CSCI 4553 - Theory: Evolutionary Computation and Artificial Intelligence, M/SR (4.0 cr)
  - CSCI 4554 - Theory: Cryptography, M/SR (4.0 cr)
  - CSCI 4555 - Theory: Neural Networks and Machine Learning, M/SR (4.0 cr)
  - CSCI 4556 - Theory: Computer Graphics, M/SR (4.0 cr)
- **Programming and Languages Courses (46xx):**

Take 2 - 4 credit(s) from the following:
  - CSCI 4604 - Programming and Languages: Graphical User Interfaces, M/SR (2.0 cr)
  - CSCI 4605 - Programming and Languages: Refactoring, M/SR (2.0 cr)
  - CSCI 4651 - Programming and Languages: Programming Languages, M/SR (4.0 cr)
  - CSCI 4652 - Programming and Languages: Compilers, M/SR (4.0 cr)
  - CSCI 4653 - Programming and Languages: Software Engineering, M/SR (4.0 cr)
  - CSCI 4654 - Programming and Languages: Modern Functional Programming, M/SR (4.0 cr)
  - CSCI 4655 - Programming and Languages: Software Design and Development II, M/SR (4.0 cr)
  - CSCI 4656 - Programming and Languages: Human-Computer Interaction and Interface Design, M/SR (4.0 cr)
  - CSCI 4657 - Programming and Languages: Programming Languages for Client-Server

Systems, M/SR (4.0 cr)

Math and Statistics Electives
Take 12 or more credit(s) from the following: MATH 1101 and above, excluding MATH 2211, or STAT 2xxx and above.
- MATH 1xxx
- MATH 2xxx
- MATH 3xxx
- MATH 4xxx
- STAT 2xxx
- STAT 3xxx
- STAT 4xxx

Math and Statistics Electives
Take 12 or more credit(s) from the following: MATH 1101 and above, excluding MATH 2211, or STAT 2xxx and above.
- MATH 1101 - Calculus I, M/SR (5.0 cr)
- MATH 1102 - Calculus II, M/SR (5.0 cr)
- MATH 2101 - Calculus III, M/SR (4.0 cr)
- MATH 2111 - Linear Algebra, M/SR (4.0 cr)
- MATH 2202 - Mathematical Perspectives, M/SR (4.0 cr)
- MATH 2401 - Differential Equations, M/SR (4.0 cr)
- MATH 2501 - Probability and Stochastic Processes, M/SR (4.0 cr)
- MATH 3xxx
- MATH 4xxx
- STAT 2xxx
- STAT 3xxx
- STAT 4xxx

Other Science Electives
Take 8 or more credit(s) from the following:
- BIOL 1xxx
- BIOL 2xxx
- BIOL 3xxx
- BIOL 4xxx
- CHEM 1xxx
- CHEM 2xxx
- CHEM 3xxx
- CHEM 4xxx
- GEOL 1xxx
- GEOL 2xxx
- GEOL 3xxx
- GEOL 4xxx
- PHYS 1xxx
- PHYS 2xxx
- PHYS 3xxx
- PHYS 4xxx

Other Science Electives
Take 2 or more course(s) totaling 8 or more credit(s) from the following:
- BIOL 1xxx
- BIOL 2xxx
- BIOL 3xxx
- BIOL 4xxx
- CHEM 1xxx
- CHEM 2xxx
- CHEM 3xxx
- CHEM 4xxx
- GEOL 1xxx
- GEOL 2xxx
- GEOL 3xxx
- GEOL 4xxx
- PHYS 1xxx
- PHYS 2xxx
- PHYS 3xxx
- PHYS 4xxx

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Sub-plans

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