

Faculty Senate Curriculum Committee

②

Approval Form

Proposal Title: Minor in Computer Science

Sponsor(s): Seth Bergmann Dept.: Mathematics & Computer Science

Check one: Course Specialization Concentration Achievement Certificate
 Certification Program Major Program Minor Change New Minor
(please name: deletion or credit/title/catalog change)

Undergraduate Graduate Credit Hours

Step 1 (Department)

Approved 3/26/86
Date

Not Approved

Seth Bergmann
Dept. CC Chairperson

Reviewed 4-2-86
Date

[Signature]
Chairperson, Dept.

Step 2 (Receipt)

SCC# 85-86-91

Proposal Received 4/10/86
Date

Brenda A. Bolay
Chairperson, SCC

Step 3 (School CC)

Reviewed 4/21/86
Date

Approved

Not Approved

Comments: minor capitalization

R. E. Zumbach
Chairperson, School Curr. Comm.

Step 4 (Academic Dean)

Comments: Approved for printing

Reviewed 4/21/86
Date

[Signature]
Signature, Dean of School

Step 5 (SCC)

Open Hearing 5/14/86
Date Approved by Senate Curriculum Committee 5/14/86
Date

Returned to sponsor(s) for the following reasons:

Step 6 (Faculty Senate)

Presented to Faculty Senate : 5/21/86
Date Approved Not Approved

Notification to Vice-President Academic Affairs 5/21/86
Date Brenda A. Bolay
Signature, SCC Chairperson

Step 7 (Vice-President for Academic Affairs)

Received 5/22/86
Date

Approved Yes No

If no, reasons are as follows:

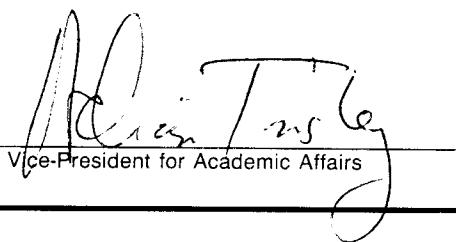
Student credit hours NA

Faculty load hours NA

Equalized credit hours NA

Official copy and approval sheet filed _____
Date

Signature


Vice-President for Academic Affairs

Registrar

Approved course description received _____
Date

Hegis Taxonomy and Course Number assigned _____

Signature _____
Registrar

_____ Date

Notification forwarded: Senate Curriculum Committee Chairperson, Department Chairperson(s), Academic Dean(s), Registrar, Sponsor(s).

CURRICULUM PROPOSAL
MINOR IN COMPUTER SCIENCE

1. Details

- a. Title: Computer Science Minor
- b. Sponsors: Seth Bergmann
Department of Mathematics and Computer Science
- c. Scope: The minor is available to students with any major, but is expected to be particularly attractive to students from Business Administration, education, the social sciences, and the life and physical sciences.
- d. Relationship to Curriculum: This minor does not include many general education courses. Therefore there was a deliberate effort to limit it to 21 semester hours.
- e. Eligibility: All students are eligible for this minor.
- f. Implementation: All courses are currently in place.
- g. Resource requirements: As this program grows, additional computing facilities will be requested from the administration. Current computing facilities include a lab of 20 IBM Personal Computers and similar computers, a digital design lab, and a computer graphics lab. Library holdings are adequate.

2. Rationale

The existing concentration in Computer Science was established before there was a major in Computer Science. Now that there is a major, we see a strong and increasing need for a minor in Computer Science.

Computers are currently pervading all professions and academic disciplines, whether used for word processing, spread sheet analysis, data base management, graphic display of information, or customized applications. This minor is designed for students who feel a need for a background in computer science which would be more substantial and specialized than provided by the concentration, yet less substantial than a second major in computer science.

The minor in computer science is not designed to prepare students to work as programmers in today's world. Rather, it is designed to give them the background they will need to deal with changes and new developments in the field after graduation. The minor includes courses in both computer hardware (Assembly Language, Digital Design, Topics in Computer Architecture) and software (Operating Systems, Programming Languages, Computer Graphics). The minor also includes courses in Computer Science theory (Data Structures and Algorithms, Theory of Computing); these are topics which will have lasting value for the students

since they are not subject to changes in technology.

The need for the minor in Computer Science is clearly demonstrated by our past experience with the concentration in Computer Science. We receive about 30-40 applications for the concentration each academic year. Many of these students have inquired about a minor, only to be told that we do not have a minor. Many prospective students and students majoring in areas other than computer science have inquired about a minor; when told that we just have a concentration in computer science, the response has often been "What is a concentration? I want a minor."

D. Essence

a. The major goal of this program is to provide an opportunity for students with a strong interest in computers to acquire a more than casual background in computer science without having to declare Computer Science as a second major. This minor consists of a strong core of five courses and two additional advanced courses. Successful completion of these courses can then be designated on a student's official record as a minor, assuring prospective employers and graduate schools of some significant knowledge of computer science.

b. The objectives of this program are:

- (i) To provide students of varying backgrounds with a knowledge of fundamentals in computer science
- (ii) To provide exposure to and experience with state of the art hardware
- (iii) To provide exposure to and experience with state of the art software
- (iv) To provide exposure to and impart knowledge of fundamental topics in computer science theory.

c. The minor in Computer Science consists of 21 semester hours:

- (i) Required courses (15 semester hours)
 - Structured Programming (Pascal)
 - Discrete Mathematics for Computer Scientists
 - Assembly Language Programming
 - Data Structures and Algorithms
 - Programming Languages
- (ii) Elective courses (6 semester hours)
 - Digital Design and Lab
 - Operating Systems
 - Computer Graphics
 - Topics in Computer Architecture
 - Theory of Computing
 - Numerical Analysis

Note: A minimum grade point average of 2.0 in these courses is

required.

d. Administration

The Computer Science Advising Coordinator will be responsible for advising students, preparing advisement literature, and verifying completed applications for the minor. Other faculty in the department will be available to assist with these tasks.

4. Consultations

Bob Lynch, Business Administration

Robert Newland, Physical Sciences

Ted Tannenbaum, Sociology

Tom Hamer, Economics



DEPARTMENT OF SOCIOLOGY

TO: Sami Beyran, Math. and Computer Science _____
FROM: Ted Zeman, Chair _____
RE: Minor in Computer Science _____
DATE: May 17, 2011 _____

You are invited to join an Advisory Board that will review the needs of general students and faculty. I personally like the level of sophistication and the kind of people who are involved in computer science and the impact of the computer science research in the field.

The board will be made up of 10 members and will be composed of students and faculty who are interested in the field of computer science and would like to see a course or two offered in the field of computer science. The board will be made up of students and faculty who are interested in the field of computer science and would like to see a course or two offered in the field of computer science.