CURRICULUM PROPOSAL FORM
University-Wide Undergraduate Curriculum Committee

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Number 25 / A
Action
Date

I. TITLE/AUTHOR OF CHANGE

COURSE/PROGRAM TITLE CO 105, Fundamentals of Computer Science

DEPARTMENT Computer Science

CONTACT PERSON William Oblitey, X4491 (X2524)

II. APPROVALS

John A. Cross
Department Curriculum Committee

Thomas P. Cunningham
Department Chairperson

Richard D. Roberts
College Curriculum Committee

W J Cole
College Dean *

(Not Applicable)
Director of Liberal Studies
(where applicable)

Provost
(where applicable)

* COLLEGE DEAN MUST CONSULT WITH PROVOST BEFORE APPROVING [illegible] APPROVAL BY COLLEGE DEAN INDICATES THAT

IV. DESCRIPTION OF CURRICULUM CHANGE

1. Catalog Description

COURSE SYLLABUS

I. CATALOG DESCRIPTION

CO 105 Fundamentals of Computer Science 3c-01-3sh

Prerequisites: None

This is the first course for Computer Science majors. It is required of all Computer Science transfer students, and is appropriate for other Natural Sciences and Mathematics students. Topics include the fundamental concepts of computer architecture, algorithm development and analysis, programming languages, software engineering, data organization and representation, and systems software. Hands-on introduction to computer usage with an emphasis on terminology and the underlying connections within the discipline.

II. COURSE OBJECTIVES

1. Students will understand what the fundamental concepts of Computer Science are.

2. Students will develop a foundation from which they can understand the relevance and inter-relationships of Computer Science courses.

3. Students will realize and be motivated to cope with the scope and dynamics of the Computer Science field.

4. Students will develop their abilities to think of problems in terms of the abstraction and refinement process, thus increasing their ability to develop solutions to complex problems by structuring them as intellectually manageable subproblems.

III. COURSE OUTLINE

The following outline of the material to be covered in the [redacted] material may be

B. Use of the Computer (5 hrs)

1. Using the terminal
2. Editing text files
3. Introduction to microcomputers
4. System commands
5. Introduction to minicomputers and mainframes
6. Introduction to supercomputers

H. Systems Software (2 hrs)

1. Operating systems
2. Compilers, interpreters and assemblers
3. Linkers and loaders

1. Data Structures

a. Consecutive storage - arrays, stacks, queues

One assignment that requires students to develop an

VII. BIBLIOGRAPHY

Behforooz, A. & O.P. Sharma, An Introduction to Computer Science, Prentice-Hall, 1986.

Brookshear, J.G., Computer Science, An Overview, Benjamin Cummings, 1985.

Denning, P. J., Report of the ACM Task Force on the Core of Computer Science, ACM Press, 1988.

B1. CO 105 will be taught by one instructor.

B2. No additional or corollary courses are needed with CO

d. Laboratory [redacted]