

Provost's Office  
Graduate Office  
May, 1986

NORTH CAROLINA STATE UNIVERSITY  
COURSE ACTION FORM

1129

DEPARTMENT/PROGRAM Mathematics, Computer Science

COURSE PREFIX & NUMBER MA (CSC) 673

COURSE TITLE Parallel Algorithms and Scientific Computation

( P A R A L A L G \_ S C I \_ C O M P )

CREDIT HOURS 3 CONTACT HOURS ( 3 - 0 )

Lecture:  Seminar: \_\_\_\_\_  
Laboratory: \_\_\_\_\_ Problem: \_\_\_\_\_ Studio: \_\_\_\_\_  
Practicum: \_\_\_\_\_ Field Work: \_\_\_\_\_ Internship: \_\_\_\_\_  
Independent Study: \_\_\_\_\_ Research: \_\_\_\_\_

GRADING: ABCD/NC  or S/U \_\_\_\_\_

PREREQUISITE(S): MA 529

COREQUISITE(S): \_\_\_\_\_

RESTRICTIVE STATEMENT(S): \_\_\_\_\_

CURRICULA/MINORS FOR WHICH COURSE IS DESIGNED:

Required: \_\_\_\_\_

Qualified Elective: \_\_\_\_\_

UNDERGRADUATE ELECTIVE: Humanities: \_\_\_\_\_ Social Science: \_\_\_\_\_ Free: \_\_\_\_\_

CATALOG DESCRIPTION: (Limit to 60 words)

Multiprocessing and supercomputer architectures will be described and will include Alliant FX/8, IBM 3090 VP-500, CRAY XMP-48, Intel iPCS and BEN Butterfly. The implementation of standard numerical linear algebra algorithms on vector and multiprocessing computers will be studied. Portability of codes from one computer to another will be examined. Typical applications to science and engineering will be discussed.

SCHEDULING: Every Year  Alternate Years \_\_\_\_\_ Other \_\_\_\_\_  
Fall \_\_\_\_\_ Spring  Summer \_\_\_\_\_

INSTRUCTOR RESPONSIBLE FOR COURSE/RANK: Plemmons (Full), White (Assoc.)

Courses taught in last two years: 405, 529, 582, 685

Graduate Faculty Status: Associate \_\_\_\_\_ Full  (For graduate courses only)

ANTICIPATED ENROLLMENT/SEMESTER: 15 Maximum No./Sect.: 30 Multiple Sections: Yes \_\_\_\_\_ No

DOCUMENTATION AS REQUIRED:

- Course Justification & Objectives
- Proposed Revision(s) with Reasons
- Previous Catalog Description
- Syllabus (New or Current)
- Previous Syllabus
- Text(s), Date(s), Price(s)
- Enrollment for Last 5 Years
- Resources
- Consultation with Other Departments

APPROVAL: C.B. Morehead 2/27/89

D.C. Mulligan 2/16/89  
Chairman, School Courses & Curricula Committee Date

John T. ... 2/28/89  
J.R. ... 2/16/89  
School Dean Date

Chairman, Univ. Courses & Curricula Committee Date

RECOMMENDED BY:

[Signature]  
Head, Department/Program

2/8/89  
Date

[Signature]  
Provost/Graduate Dean Date

MAR 16 1989

APPROVED EFFECTIVE DATE \_\_\_\_\_

DATE OF NEXT REVIEW \_\_\_\_\_