NEW – REVISED - DELETED
Course Submission and/or Requests
For Inclusion in General Education

Department Information Technologies

Course Title, Prefix and Number Scientific Comp. Program. I (Fortran), CMP-201

Submitted By Bonnie A. Murphy

New* _____ **Change __X__ Deletion _____ ***Inclusion in General Education

** NEW course submissions require a COURSE INFORMATION OUTLINE attachment and NJ TRANSFER TEMPLATE.*

***CHANGED courses require the EXISTING COURSE OUTLINE with CHANGES IN RED attached.*

****Any NEW OR REVISED course that is submitted for inclusion in the GENERAL EDUCATION COURSE LIST must be reviewed by the GENERAL EDUCATION COMMITTEE, which reviews all proposed General Education Courses for their compliance with the General Education Guiding Principles.*

Detailed Description of Changes/Addition:

This course is being deleted because it has not been offered for quite some time.

Rationale for Addition/Deletion/Change: Be specific. If these changes/additions/deletions require approval from an external accrediting agency or an advisory committee, include such approval.

No longer current or offered. Datatel status should be changed to O.

Departments or programs affected by this change and description of effects to those programs.

No other departments will be affected by the deletion of this course.

APPROVALS

Department Chairperson bamurphy Date 3/7/11

Division Dean _____ Date 4/26/11

General Education Committee _____ Date _____
(if necessary)

Chair of Curriculum Committee _____ Date 5/4/11
(***Reviews all submissions with Vice President of Academic Affairs before bringing them to the Curriculum Committee***).

DLJ 5/3/11

COUNTY COLLEGE OF MORRIS
COURSE INFORMATION OUTLINE

Course.....Scientific Computer Programming (Fortran)..... Cat. No. CMP201.....
Clinical
Class Hours .....3.....Laboratory Hrs. ....1..... Credit Hours.....3.....Course Fee .....$40.....
Recitation

Department Chairperson Approval .....[signature]..... Approval Date 10/8/97.....

Division Dean Approval .....[signature]..... Approval Date 10/17/97.....

1. Prerequisite (Last Course or Courses).....CMP113.....

2. Co-requisite .....

3. Textbooks
   Modern Fortran 70/90, The Alternate Edition by Gary Bronson
   Scott/Jones Inc.

4. Supplementary Books

5. Supplementary Materials

   Two 3.5 inch diskettes
   Ten laboratory folders

6. Specialized equipment, supplies, facilities, for classes limited by enrollment or restricted by accreditation and/or equipment limitations. (information will be used to determine differential funding category).

   This course requires specialized equipment with limited life cycle of one to five years. The equipment is expensive, subject to rapid obsolescence, and has high maintenance costs. The excess contact hours result from a catalog-stated requirement that students must spend additional time in a laboratory setting.

6. Statement of Course Objectives
   - Provide the basic syntax of the Fortran Programming Language
   - Introduce problem solving techniques for a scientific environment
   - Present basic techniques in presenting formatted output
   - Cover algorithms inherent in scientific programming problems

(over)

8. Statement of Relation to Curriculum(s)

   - Elective in 3500 Scientific Programming Option
   - Elective in 3501 Business Programming Option
   - Elective in 3502 Microcomputer Option

9. Catalog Course Description (Please include when course will be offered --Fall, Spr., Sum., etc.)

   This course emphasizes the development of well structured and efficient programs using Fortran. Topics include type declarations, I/O formatiing, assignments, control structures, functions, subprograms, arrays and sequential files. Algorithms include binary search, sorting, random numbers, and numerical methods. Laboratory assignments provide hands-on experience.

Cat. No.____

10. Course Outline
    - Editor
    - Compiler
    - Integers, reals and characters
    - I/O formatting
    - Assignment statements
    - Decision structure
    - Looping structure
    - Functions
    - Subroutines
    - Arrays
    - Random number generators
    - Sequential files
    - Searching
    - Sorting
    - Root finding
    - polynomials

(over)

County College of Morris

COURSE INFORMATION OUTLINE

Course: Scientific Computer Programming I (Fortran) Cat. No.: CMP 201

Class Hours: 2 Lab Hours: 2 Credit Hours: 3

Department Chairperson Approval: [signature] Approval Date: 11/5/87

Division Chairperson Approval: [signature] Approval Date: 11/4/87

1. Prerequisite (Last Course) : CMP 105 and CMP 113

2. Co-requisite: CMP 105 Computational Techniques for Programming
   CMP 113 Computer Concepts & Problem Solving Techniques

3. Textbooks: Nickerson, Robert C., Fundamentals of FORTRAN 77 Programming, Little, Brown and Company, Boston, 1985.

4. Supplementary Books: None

5. Supplementary Materials: None

6. Statement of Course Objectives:
   a) to introduce the fundamental structure of FORTRAN 77 language
   b) to develop structured programming concepts using FORTRAN 77
   c) to gain an understanding of the need of and use for each of the language elements

7. Statement of Relation to Curriculum:

   a) Required for CIS 3500
   b) Elective for CIS 3501

8. Catalog Course Description:

   This course in computer programming emphasizes the development of well structured, efficient, understandable, and correct programs in FORTRAN 77. Topics include type declaration, I/O formatting, assignment statements, loops, arrays, and sequential files. Students are required to complete a series of projects and laboratory assignments demonstrating the above topics.

COURSE SYLLABUS

CLASS	TOPIC/TEST	REFERENCE
1	Lab - Course Introduction	
2	Computer/Fortran Concepts	Chap. 1
3	Lab - List directed I/O	pp. 32-44
4	Fortran Program Structure/Pseudocode	pp. 45-65
5	Lab - Program Entry & Submission	Handout
6	Arith. Expressions/Parameter	pp. 68-81
7	Lab - Arithmetic Assignment	p. 92(#5)
8	Intrinsic Functions/Mixed Mode	pp. 82-91
9	Test #1	
10	Lab - Block/Nested IFs, Relationals	pp. 97-111
11	Case, Logical IFs	pp. 111-119
12	Lab - Programming for Decisions	p. 122(#4)
13	Debugging Techniques	
14	Lab - Loop Control, Nested Loops	pp. 128-145
15	DO/WHILE Loops	pp. 145-166
16	Lab - Programming for Repetition	p. 169(#3)
17	Test #2	
18	Lab - Formatted I/O	pp. 174-187
19	Formatted I/O	pp. 187-211
20	Lab - Formatted I/O Programming	p. 214(#3)
21	Program Development	pp. 218-248
22	Lab - Array Structure	pp. 302-318
23	Array Processing/DATA	pp. 318-334
24	Lab - Array	p. 339(#2)
25	Test #3	
26	Lab - Logical Data	pp. 279-292
27	Subprograms(Function/Subroutine)	pp. 381-414
28	Lab - Subprograms	p. 417(#10)
29	Files (Sequential)	pp. 424-436
30	Lab - Files	p. 462(#1)
31	Final Examination	

DETERMINATION OF COURSE GRADE

Number of Projects_____counts as _____% of Grade

Number of Tests/Quizzes_____counts as _____% of Grade

Final Exam_____ or Project_____counts as _____% of Grade

Attendance/Class Participation____counts as _____% of Grade

A = 100 - 90
B = 89 - 80
C = 79 - 70
D = 69 - 60
F = 59- 0

. Sequence of topics may be changed without prior notice
. Excessive lateness or absence may result in a lower grade