CIS 227 - Numerical Computation I
Section 101 - Spring Semester 2005

Time and place  1:25 - 2:15 pm, Monday, Wednesday, and Friday, CSCB 130

Prerequisite    MA 126

Credit Hours   3

Instructor      Keith Lynn

Office          Faculty Court East 2

Contact Information  Phone: 460-6390
                      E-mail: lynn@cis.usouthal.edu
                      URL: http://www.cis.usouthal.edu/~lynn

Office Hours      Monday and Wednesday 2:20 pm - 3:20 pm and by appointment as needed.

Course Web Page  A web page for this section will be maintained at

Special Assistance  Any student with a qualified handicap who wishes to use a tape
recorder or needs any accommodation should talk with the instructor
after class so that arrangements can be made.

If you have a specific disability that qualifies you for academic
accommodations, please notify the instructor/professor and provide
certification from Disability Services. (OSSS is located in Room 270
of the Student Center (460-7212)).

Textbook         FORTRAN 77 for Engineers and Scientists, 4th edition, by Nyhoff & Leestma

Related Material The software necessary for this course can be obtained freely on the Internet.
The compiler we will be using is the g77 GNU FORTRAN 77 compiler. We
will also make use of the gVIM editor for creating source code.

Course Description Introduction to problem solving using the FORTRAN 77 high-level programming
language. Topics include: algorithm design strategies, programming concepts,
programming environment, simple data structures, and internal representation
and limitations of data types.

Objectives  The student will be able to:

• Use a programmer’s editor and command-line compiler to create and test
  simple FORTRAN programs.
• Describe and use the primitive data types supplied with a high-level
  programming language.
• Correctly use sequential execution, selection structures and loops to
design and implement algorithms.
• Use aggregate data structures (such as arrays) in problem solving.
• Understand and apply the basic numerical methods used in engineering,
  and their limitations (eg.error).
Grading

The course grade will be determined on the following basis:

- Quizzes: 10%
- Programs: 25%
- Test 1: 20%
- Test 2: 20%
- Final Exam: 25%

Grading Scale

- 90+ A
- 80 - 89.99 B
- 70 - 79.99 C
- 55 - 69.99 D
- 54.99 or less F

Make-Up Policy

No make-up tests are given. Weights of other tests will be increased proportionately provided written medical or legal excuse for absence is provided in advance. Absence from the final exam will result in a failure for the course.

Important Dates

- First day of class: Monday, January 10
- Test 1: Friday, February 18
- Test 2: Friday, April 8
- Dr. Martin Luther King, Jr. Holiday: Monday, January 17
- Mardi Gras Holiday: Tuesday, February 8
- Spring Break: March 14 - March 20
- Last day to drop: Friday, April 29
- Last day of classes: Friday, April 29
- Final Exam: Wednesday, May 4, 1:00 pm - 3:00 pm

Weekly Quizzes

You will be given a short quiz at the beginning of class on each Friday unless an exam is being given on that day. These quizzes will consist of material covered up to and including the previous class meeting. No make-ups will be given on these quizzes because the quiz solution will be made available after the quiz is given. It is very important that these quizzes be taken seriously. They are intended to keep everyone up to date with the material, and some of the problems on the quizzes may be seen again on exams. There will be a total of 13 quizzes, and the lowest 3 grades will be dropped. The remaining 10 quiz grades will be averaged to account for 10% of your final grade. Please keep quiz grades in perspective.

Program Submissions

Full standards will be given with each assignment. Programs will be submitted electronically and are graded from 0 to 100 points. Each assignment is due no later than midnight on the date specified for its completion. Late programming assignments will be accepted for up to 1 week. Any assignment submitted between the date specified and 1 week from that date will be assessed a 15 point late penalty. No assignment will be accepted after 1 week from its due date. All programming assignments will be averaged to account for 25% of your final grade.

Cheating

The CIS Policy on cheating is:

Unless otherwise stated by your instructor, all work submitted for grading must be your own work. This means that the work you submit for grading must be designed and implemented by one and only one person, and that person must be you. Any deviation from this policy may result in a failing grade for the course for all parties involved. This policy applies to examinations, programming assignments, quizzes, and homework assignments.

Additionally, a record of the incident may be placed in the student’s file and further action may be taken at the university level.