

## CS 1073 (COMPUTER PROGRAMMING FOR SCIENTIFIC APPLICATIONS)

Spring 2013

Professor: A. T. Chronopoulos Email: On BlackBoard (also:[atc@cs.utsa.edu](mailto:atc@cs.utsa.edu))

Office: SB 3.02.16 Office Hours: T, Th 15:15-16:15 or by appointment

Course Meetings: T, Th 14:00-15:15 AM, in Room SB 3.02.07

T.A.:

Office Hours: ( in the lab: SB 3.02.04 )

The course will be on Blackboard (<http://bb.utsa.edu>). Students must learn how to use it.

### Textbook:

*Fortran 95-2003 for Scientists and Engineers 3<sup>rd</sup> ed. by Stephen J. Chapman, McGrawHill, 2007, or 2008.*

### Course Objectives and Contents

Through this course, students will learn programming with Fortran 95 on standard PC computers. They will also learn how to write solve scientific computing model problems from science and engineering disciplines by writing/running Fortran programs. The course contents: Chapters 2-9, 11. The students are responsible for the entire contents, unless the instructor excludes some topics. The lecture notes are used to explain the topics, but only the book chapters have the entire course contents.

**GRADING:** There will be homework assignments, which include programming using Fortran and three (open-book) exams. Each exam will be on questions from the previously covered chapters only. This means that the midterm exams will not be comprehensive. Make-up exams will be given only under serious circumstances (e.g. illness). The course-grade (**100%**) will be based on exams (**60%: for 3 midterm exams**) + 9 homework programming assignments (**HWPAs**) (so-called projects) (**40%**). **Note: Missing HWPAs will lead to serious course-grade reduction, even to non-passing course-grades.**

**ATTENDANCE:** Students must attend all classes.

**Homework Programming Assignments:** They will be given in class meetings and they will be due as specified (usually 1 week later). All assignments are must be handed in on the due date. Late HWPAs will not be accepted unless prior arrangements with the instructor are made in advance.

**Academic Dishonesty:** Plagiarism and cheating (e.g. in HWPAs) are serious offenses and may be punished by failure on exam/HWPA/course; and/or expulsion from the University. For more information, refer to the "Academic Dishonesty" policy in the UTSA Undergraduate Catalog.

### Course Schedule (Semester period Jan 14-May 11, 2013):

Week 1 Chapter 1 (Jan 14- Jan 18)

Week 2 Chapter 2, 3 (Jan 21- Jan 25)

Week 3 Chapter 3, 4 (Jan 28-Feb 1)

- Week 4 Chapter 4, Review (**Feb 4- Feb 8**)
- Week 5 **Midterm-Exam 1 (Tues.)**, Chapter 5 (**Feb 11- Feb 15**)
- Week 6 Chapter 5 (**Feb 18- Feb 22**)
- Week 7 Chapter 6 (**Feb 25- March 1**)
- Week 8 Chapter 7 (**March 4- March 8**)
- Week 9 (**Spring Break, March 11- March 15**)
- Week 10 Review, **Midterm-Exam 2 (Thurs.) (March 18- March 22)**
- Week 11 Chapter 8 (**March 25- March 29**)
- Week 12 Chapter 8, 9 (**April 1- April 5**)
- Week 13 Chapter 9 (**April 8- April 12**)
- Week 14 Chapter 11 (**April 15- April 19**)
- Week 15 Review (**April 22- April 26**)
- Week 16 **Midterm-Exam 3 (Tues., April 30, End of Course)**