MAT5939-03 – ACM Computational Seminar
Monday 6:45 – 8:00 PM, Love 102, Fall 2014

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Office Hours: Carothers (MCH) 217A Tuesday & Thursday, 2–4 PM or by appointment

Course Objectives: Learn the Fortran90 programming language through classes and practice.

Prerequisites: There are none, this is an introductory course.

Course Outline:
Chapters 1 & 2. Introduction

1. Program Structure

2. Compiling

3. Comments

4. Style

Chapter 3. Program Elements

1. Data Types

2. Control Structure

3. Input/Output

Chapter 4. Organization

1. Functions

2. Subroutines

3. Scoping

4. Passing Functions to Functions/Subroutines

5. Modules

Chapter 5. Arrays

1. One–Dimensional Arrays

2. Multi–Dimensional Arrays

3. Passing Arrays to Functions/Subroutines

Chapter 6. Object Oriented Programming

1. Derived Types

2. Interfaces

Chapter 7. Additional Topics

1. Overloading Operators

2. Dynamic Arrays

3. Optional Arguments

4. Formatted File I/O

5. Recursive Functions

6. Source Code Management

7. Data Structures

Grade Policy: Homework is assigned weekly. Homework is graded on a $0 - 3$ scale:

- 0 - no homework submitted or code copied from another source

- 1 - homework submitted, but did not demonstrate code functions properly

- 2 - showed code worked properly, but only in one case e.g.

- 3 - accounted for edge cases and showed code performs properly in all required situations

To earn a grade of S, you must average a 2 or higher across all the homeworks. If and only if you get a 2 on an assignment you can correct and resubmit to earn a 3. For each homework assignment you will hand in a hard-copy report and e-mail me your source code. When e-mailing me please include [MAT5939] in the subject line of the email.

Homework Policy: You must convince me your code functions as required. It is up to you to consider sufficient test cases, although I will provide guidance and more examples of what this means in the first couple of assignments. The reports should be considerably less detailed than those submitted for FCM. For example, there is no need for a "Description of Mathematics" or "Decription of Algorithm"; rather, an explanation of why you chose the test cases and any special programming methods/data structures you decided to use to solve the problem will be sufficient.

Attendance Policy: Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy: The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://fda.fsu.edu/Academics/Academic-Honor-Policy.)

Americans with Disabilities: Students with disabilities needing academic accommodation should:

1. Register with and provide documentation to the Student Disability Resource Center

2. Bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)

sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Syllabus Change Policy: Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.