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MAT5939-03 – ACM COMPUTATIONAL SEMINAR  
*Monday 6:45 – 8:00 PM, Love 102, Fall 2015*

Instructor: Joe McKenna  
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**Office Hours:** Carothers (MCH) 402-F Tuesday 2–4 & Wednesday, 12–2 PM or by appointment

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

**Prerequisites:** Graduate Standing in Mathematics.

**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. 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. Source Code Management
5. 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 functions properly, but results not fully explained
- 3 - showed code functions properly, presented results clearly and fully

To earn a grade of S, you must average a 2 or higher across all the homeworks. 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 “Description 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](mailto: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.