SYLLABUS

MATHEMATICS 171.57241   Computer Literacy for Math Majors   Spring 2005

Meeting time		Location
TR	12:40-1:55	Perkins 60
TR	2:10-3:25	Ayres 15

	Instructor	TA
Name:	George Butler	Dan Moseley
Office:	Ayres 107F	Ayres 107D
Email:	gbutler@math.utk.edu	moseley@math.utk.edu
Office Hours:	Monday 1:00- 2:30 Thursday 9:40-10:55 Friday 11:15-12:00	Monday 3:00-4:00 Wednesday 3:00-4:00

Course Description (from 2004-2005 Course Catalogue): Introduction to computers, the internet, mathematical packages and programming for prospective mathematics majors. Prereq: 141.

Course Objective: Provide students with the ability to design algorithmic solutions to Mathematical problems and implement their algorithms in FORTRAN 95.

Textbooks: Fortran 90/95 for Scientists and Engineers by Stephen J. Chapman, ISBN: 0-07-282575-8, and Programming with Fortran 77 by William E. Mayo and Martin Cwiakala, ISBN: 0-07-041155-7.

Grading scale:	
900-1000	A
870- 899	B+
800- 869	B
770- 799	C+
700- 769	C
600- 699	D
0- 599	F

Grade composition:	
Twenty Highest Lab grades (30 pts each)	600
Final Programming Project	200
Midterm	100
Comprehensive Final	100
Total	1000

Attendance Policy: Attendance is highly recommended: new language features will be covered in each lecture, and you will always be guaranteed access to a machine/grad student during the scheduled lab time. However, all labs will be submitted electronically, and all due dates, lab handouts, and announcements will be available online. This means you will be able to complete most of the coursework from home if you wish. Note that the labs will be designed to require several hours to complete; additional lab time may be required to complete some labs.

Disability Accommodations: Students who have a disability that require accommodation(s) should make an appointment with the Office of Disability Services (974-6087) to discuss their specific needs as well as schedule an appointment with me during my office hours.

Cheating: Cheating consists of plagiarism or looking at, copying, or modifying code from any unauthorized source on a graded assignment. Authorized sources include the textbooks, Dan,

and myself. Any other source (including but not limited to fellow students, other books, or code downloaded from the web) is considered unauthorized. Plagiarism is defined as copying or modifying code from any source (whether authorized or not) without giving proper citations. Proper citations consist of a name and date for code Dan or I write, or the title, author, and ISBN for code taken from a textbook. Each instance of unauthorized copying will result in a grade of 0 for the relevant assignment. The first instance of plagiarism will result in a point deduction equal to the total points possible
for the relevant assignment; any additional instance of plagiarism will result in an F for the course.

Course Outline					
Tuesday			**Thursday**		
Date	*Topic*	*Reading Assignment*	*Date*	*Topic*	*Reading Assignment*
			Jan. 13	UNIX shell commands	See Handout
Jan. 18	vi	See Handout	Jan. 20	HTML	
Jan. 25	Intro to Maple		Jan. 27	Intro to Matlab	
Feb. 1	Intro to Fortran: Fortran Versions, Program Structure, and Compiling	1.1-1.2, 2.1-2.4	Feb. 3	Intro to Fortran (continued): Constants, Variables, Statements, Arithmetic Expressions, and Basic I/O	2.5-2.10
Feb. 8	Logical Expressions	3.1-3.3	Feb. 10	Branching Statements	3.4-3.5
Feb. 15	DO Loops	4.1.1	Feb. 17	Counting Loops, WHILE Loops, and Named Loops	4.1.2-4.1.6
Feb. 22	Character Data	4.2, 10.1	Feb. 24	I/O Formatting	5.1-5.4
Mar. 1	File I/O	5.5, 14.3	Mar. 3	Arrays	6.1-6.4
Mar. 8	Multidimensional Arrays	8.1-8.2	Mar. 10	Array Initialization	8.4-8.5
Mar. 15	**Midterm**		Mar. 17	Subroutines	7.1, 10.3
Mar. 22	**Spring Break**		Mar. 24	**Spring Break**	
Mar. 29	Functions and Recursion	7.4, 13.2	Mar. 31	Modules	7.2-7.3
Apr. 5	User-Defined Data Types	12.1-12.5	Apr. 7	Pointers	15.1-15.3
Apr. 12	Dynamic Memory Allocation	8.6, 15.4	Apr. 14	Matlab Programming	
Apr. 19	Final Project		Apr. 21	Final Project	
Apr. 26	Final Project		Apr. 28	Final Project	
May 3	Final Exam 12:30-2:30		May 5	Final Exam 2:45-4:45	