Mathematics 21D (Intro/Differential Equations), 2000 Fall Quarter

Syllabus for 21D (Section B00)

Instructor:	**Michael Holst**, Associate Professor, UCSD Mathematics Department
Office Location:	5739 APM, (858) 534-4899, mholst@math.ucsd.edu
Office Hours:	3:00pm-4:00pm MW in my office, and by appointment.
Lectures Hours:	12:20pm-1:10pm MWF, CENTR 119
CONTACTING ME:	The best way is email. Also, check the class homepage FREQUENTLY.
CLASS HOMEPAGE:	`http://scicomp.ucsd.edu/~mholst/teaching/ucsd/21d_F00/index.html`
TAs:	**Liz Fenwick**: jfenwick@math.ucsd.edu, 5801 AP&M (B01, B02; B50, B51)
	Graham Hazel: ghazel@math.ucsd.edu, 6402D AP&M (B03, B04; B52, B53)
	Chris Peters: cpeters@math.ucsd.edu, 6349A AP&M (B05, B06; B54, B55)
TA Office Hours:	Times and location to be announced in discussion sessions.
Prerequisites:	Math 21C (or equivalent).
Required texts:	1. *CALCULUS: Early Transcendentals, 4th Edition*, by James Stewart. (Only Chapter 11 will be covered).
	2. Elementary Differential Equations, by W. E. Boyce and R. C. DiPrima, 6th Edition.
	3. Ordinary Differential Equations using MATLAB, by Polking and Arnold, 2nd Edition.
Recommended texts:	1. Solutions manual for the Boyce and DiPrima text.
Written Homework:	Assigned weekly ON THE WEBPAGE (20% of grade), due in class each Friday.
Computer Homework:	Assigned weekly ON THE WEBPAGE (10% of grade), collected by your TA.
Exams:	There will be two in-class Friday midterms (15% each) and a final (40%). Midterm dates will be announced in advance in class and ON THE WEBPAGE.
Grading:	Final grade = midterms (30%) + homeworks (30%) + final (40%).

Course Topics: The course will first cover sequences and series (Chapter 11 of Stewart), and then we will move over to the Boyce and DiPrima text to cover ordinary differential equations and their solution and approximation by various techniques (including series-based solutions). You can only *learn* mathematics by *doing* mathematics, and therefore I weight the written homeworks heavily. More importantly, if you can do the homeworks, you will do well on the exams.

Exam Policies: You will be allowed to bring exactly *one* sheet of notes (a crib sheet) to the exam, along with calculator (although you should not actually need a calculator). You will not be allowed to consult books or other materials during the exam. There will be no makeup exams.

Reading and Homework: You should read the relevant sections in the book before the lectures, and then work on the assigned homework problems after the lectures. The homework for each week will be collected in class every Friday, after you have had a chance to work on the problems with the TA in the discussion section on Thursday. Some of the problems will be graded by the TA, and returned to you the following week. The late homework policy is as follows: there is no credit for late homeworks. You are allowed (and encouraged) to discuss the homework problems together, but each student must prepare and turn in his or her own solutions to the homeworks.

Computer Laboratory: The computer laboratory assignments (10% of your grade) are designed around the use of MATLAB to solve problems and to visualize solutions to problems that are typically too difficult or too tedious to do by hand. On Tuesdays (same time slot as your Thursday TA session), you will meet with your TA on the northeast corner of the 3rd floor of CLICS to work on the computer homework. Your TA will decide when and how you will turn in the computer homeworks.