Math 581 – Advanced Numerical Analysis
Fall 2003
Tuesday and Thursday, 19:00-20:15, JR202

Instructor:	**Dr. Rabia Djellouli**
Office:	FOB (Faculty Office Building) Room 121
Office Phone:	(818) 677-5867 (24 hours voice mail)
Departmental Phone:	(818) 677-2721
Email:	Rabia.Djellouli@csun.edu
Office Hours:	Tuesday, Thursday,15:00–16:00, or by appointment.

Motivation: Computation has become one of the three legs of science and engineering: Theory, Experiment, and Computation. No discipline has escaped the influence of computation and many disciplines have been reinvented because of new computational capabilities. Today's fastest computers perform over 4 trillion multiplications per second. Good mathematical algorithms are essential to effectively harness this power. This class is the first step in understanding the mathematics of computation.

Course Description: This course present the mathematical underpinnings of modern numerical methods and practical implementations of those methods.

Textbook: **Numerical Analysis: Mathematics of Scientific Computing**, Third Edition, by David Kincaid and Ward Cheney, The Brooks/Cole Series in Advanced Mathematics, 2001.

Topics Covered: From Chapter 3 to Chapter 6.

Exams: There will be three in-class tests (Tentative Schedule: September 23rd, October 21st, and November 18th) and a comprehensive exam (Tuesday, December 9th, 2003, 20:00 – 22:00).

All exams are closed book. The lowest midterm score will be dropped. There will be no make up exams.

Homework: Homeworks are due on Thursdays. You can work in groups, but you must turn in your own write-up. Your lowest two homework scores will be dropped. No late homework is accepted.

Quizzes: Quizzes may be introduced to help the class to keep-up.

Programming: There will be three programming assignements. You can use your prefered programming language. You can work in groups, but you must turn in your own write-up. Your lowest programming assignement score will be dropped.

Grading Scheme: 100 points – homeworks + quizzes

50 points – each programming assignement

100 points – each midterm

200 points – Final exam

600 points – Total Score

Religious Conflicts: Students who have conflict between religious observance dates and course examinations or assignments, please contact me before september 8th, 2003.

Important Date: October 17th, 2003 is the last day for dropping your class.