Course #: MATH 4329 (CRN 14184)
Course Title: Numerical Analysis
Credit Hrs: 3
Term: Fall 2021
Course Meetings & Location: TR 13:30-14:50, LART 101
Prerequisite Courses: MATH 3323 or MATH 4326
Course Fee: (if applicable) None
Instructor: Granville Sewell
Office Location: Bell 200
Office Hours: TR 10:30-11:20
Contact Info: Phone # 747-6762
E-mail address sewell@utep.edu
Fax # 747-6502
Emergency Contact # 747-5761

Textbook(s), Materials:
Suggested:
Course Objectives (Learning Outcomes):

a. Become familiar with some of the more popular numerical algorithms for solving certain mathematical problems, such as nonlinear and linear algebraic systems, differential equations, eigenvalue extraction and numerical quadrature.
b. Gain experience writing computer programs to implement some of these algorithms.
c. Learn how to determine the complexity of an algorithm, that is, the asymptotic dependence of computer time on problem size.
d. Learn how to analyze the truncation error of an algorithm, for example, to determine the dependence of error on discretization size.
e. Learn how to anticipate roundoff errors associated with the use of finite precision arithmetic, and to be aware of the type of algorithms which are likely to suffer from serious roundoff error.
f. Learn to choose among competing algorithms for particular applications, taking into account algorithmic complexity, accuracy and stability.

Course Activities/Assignments: There will be homework assigned regularly, which will include computer (MATLAB) projects.
Assessment of Course Objectives: Grades will be based on homework and exams, details are at the class website, www.math.utep.edu/Faculty/sewell/4329/4329o.htm
Course Schedule: Complete homework and test schedule is given at the class website, www.math.utep.edu/Faculty/sewell/4329/4329o.htm
Grading Policy: 20% based on homework, 40% based on two tests, 40% based on final exam. Details are at course website, www.math.utep.edu/Faculty/sewell/4329/4329o.htm
Make-up Policy: Late homework not accepted. Make up tests will be given for excused absences.
Attendance Policy: None
Academic Integrity Policy: The University policy is that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Each student is responsible for notice of and compliance with the provisions of the Regents’ Rules and Regulations, which are available for inspection electronically at http://www.utsystem.edu/bor/rules/homepage.htm

All students are expected and required to obey the law, to comply with the Regents’ Rules and Regulations, with System and University rules, with directives issued by an administrative official in the course of his or her authorized duties, and to observe standards of conduct appropriate for the University. A student who enrolls at the University is charged with the obligation to conduct himself/herself in a manner compatible with the University’s function as an educational institution.

Any student who engages in conduct that is prohibited by Regents’ Rules and Regulations, U. T. System or University rules, specific instructions issued by an administrative official or by federal, state, or local laws is subject to discipline, whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

Civility Statement: Calculators may not be shared during quizzes and exams. Please do not use cell phones, pagers, IPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Please do not wear headsets or blue tooth devices during class. Please don’t talk in class. Cell phone calculators may not be used on quizzes or exams. Active participation in class is expected, teamwork in class will be implemented.

Disability Statement: If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support services (CASS) at 747-5148 or at <cass@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

Military Statement: If you are a military student with the potential of being called to military service and/or training during the semester, please contact me by the end of the first week of class.