Fall 2017
MAT 581: Numerical Methods with Programming
Section 002 (TuTh 8:00am – 9:20am)

Course instructor: Prof. Minghao Rostami, 304D Carnegie, mwrostam@syr.edu

Office hours: TuTh 9:30am – 10:30am, or by appointment.

Textbook: Numerical Methods: Using MATLAB, 3rd Edition, by Lindfield & Penny.

Course Description: Approximation methods for solution of nonlinear equations. Interpolation problems. Numerical integration. Solution of ordinary differential equations. Other numerical methods. Error analysis. Programming in MATLAB.

Course webpage: Please check Blackboard frequently for course announcements and materials.

Calculator policy: You are allowed to use a scientific calculator on homework, quizzes, and exams. You still need to show work to receive any credit. You are not allowed to use a more sophisticated calculator such as a graphing calculator.

Programming language: MATLAB. Please make sure that you will have access to a computer with MATLAB installed on it. For example, you can use the computers in the lab located on the second floor of the Carnegie building. It is likely that there are other options on campus.

Programming is an essential part of the course. It is NOT optional. Your final grade will depend on both your understanding of numerical methods and your programming skill.

Written homework: A set of homework problems will be posted on Blackboard after most lectures. They will be collected at the beginning of the next lecture. 20 sets of homework will be collected and each is worth 5 points.

Programming assignment: A programming assignment will be posted on Blackboard after most lectures. Your MATLAB codes written for the current week's assignments should be sent in a single email to mwrostam@syr.edu before 11:59pm on the following Monday. 20 programming assignments will be collected and each is worth 5 points.

Quiz: There will be a quiz at the beginning of most lectures. It will cover the previous lecture and may have a programming component (i.e., you may be asked to write a MATLAB program on paper). There will be 20 quizzes and each is worth 5 points.

Mid-term exam: There will be two in-class mid-term exams: one on Tuesday, October 3rd and the other on Thursday, November 9th. Each exam is worth 100 points and includes a programming component.

Final exam: The final exam will be given from 12:45pm to 2:45pm on Friday, December 15th. The location will be announced once it has been scheduled. The final exam is worth 100 points

and includes a programming component.

Mark your calendar now: mid-term exams on Tuesday, October 3rd and Thursday, November 9th, and final exam on Friday, December 15th.

There will be no make-ups for homework, quizzes, or exams unless you have a truly exceptional excuse, which has to be corroborated by a statement from your doctor, coach, etc.

Grading Policy: Total points possible is 600 = 100 (written homework) + 100 (programming assignments) + 100 (quizzes) + 200 (mid-term exams) + 100 (final exam). A letter grade will be assigned based on the percentage of points that you earn: 93% to 100% → A, 90% to 93% → A-, 87% to 90% → B+, 83% to 87% → B, 80% to 83% → B-, 77% to 80% → C+, 73% to 77% → C, 70% to 73% → C-, 60% to 70% → D, below 60% → F.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) at http://disabilityservices.syr.edu, located in Room 303 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see http://class.syr.edu/academic-integrity/

Religious observances policy: SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week

of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.