

**Fall 2017**

## **MAT 581: Numerical Methods with Programming**

**Course Instructor:** Lixin Shen

**Office:** 206D Carnegie,

**Email:** [lshen03@syr.edu](mailto:lshen03@syr.edu)

**Office Hours:** **Monday, Wednesday 11:00AM-noon, or by appointment**

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

**Prerequisites:** MAT 387

**Textbook:** Numerical Methods: Using MATLAB, 3<sup>rd</sup> Edition, by Lindfield & Penny

**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.

**Written Homework:** A set of homework problems will be posted on Blackboard on every Wednesday and will be due next Wednesday in class. Late homework is not accepted.

**Programming Assignment:** A programming assignment will be posted on Blackboard on every Wednesday. Your MATLAB codes written for the current week's assignments should be sent in a single email to lshen03@syr.edu before 11:59pm on the following Wednesday.

**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).

**Grading Policy:** Written Homework/Programming assignments/quizzes will comprise 30% of the course grade with two in-class exams each 20%, one on October 4 and one on November 8, and the final exam 30%. Letter grades will correspond to numeric grade intervals as follows.

[93,100)→A [90,93)→A- [87,90)→B+ [83,87)→B [80,83)→B-  
[77,80)→C+ [73,77)→C [70,73)→C- 60,70)→D [0,60)→F

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**Exam schedule: *The exam days are firm.***

**Exam 1:** 4 October 2017

**Exam 2:** 8 November 2017

**Final Exam Date:** The final exam covers the entire course.

**Monday DECEMBER 11, 2017 - 12:45AM - 2:45 PM**

<b>Deadlines and important dates for Fall 2017</b>	
First Day of Classes	Monday, August 28
Last Day to Add a Class	Tuesday, September 5
Financial Drop	Monday, September 18
Academic Drop	Monday, October 23
Withdrawal Deadline	Friday, November 17
Thanksgiving Break	November 19 - 26
Last Day of Classes	Friday, December 8

**Students with Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <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.

**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 are 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.

**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.

### **Related links:**

The Academic Integrity Policy:

[http://class.syr.edu/wp-content/uploads/2017/05/Academic-Integrity-Policy\\_final.pdf](http://class.syr.edu/wp-content/uploads/2017/05/Academic-Integrity-Policy_final.pdf)

What Students Need to Know About Academic Integrity

[http://class.syr.edu/wp-content/uploads/2017/01/What-Students-Need-to-Know\\_7A.pdf](http://class.syr.edu/wp-content/uploads/2017/01/What-Students-Need-to-Know_7A.pdf)

Additional guidance for students can be found in the Office of Academic Integrity resource: "What does academic integrity mean?"

<http://academicintegrity.syr.edu/what-does-academic-integrity-mean/>

