**Introduction to Numerical Computing I**  
**MATH/CS-42201/52201, Fall 2020**

**Mon/Wed/Fri: 10am—10:50am** (through Blackboard Collaborate Ultra, unless change announced.)

**Instructor:** Jing Li, E-mail: jli4@kent.edu

**Office Hours:** M W F: 11:50am—1:30pm, through link [https://us.bbcollab.com/guest/c3db0b8a131740fb88a8aa570118bddd](https://us.bbcollab.com/guest/c3db0b8a131740fb88a8aa570118bddd), or by Appointment.

This course is mostly about numerical linear algebra. Topics include computer arithmetic, conditioning and stability, solving linear systems of equation, solving linear least-squares problems, eigenvalue problems, as well as solution of nonlinear equations. Extensive computation using MATLAB (or GNU Octave, a free version of MATLAB) will be required in class and in homework.

**Prerequisite:**

MATH 12003 with a minimum grade of C (2.0); MATH 21001 or MATH 32051 with a minimum grade of C (2.0); and CS 10061 or CS 13001 or both CS 13011 and CS 13012 with a minimum grade of C (2.0). Students who do not have the proper prerequisites risk being deregistered from the class.

**Textbook/Software Requirements:**

No textbook is required. Lecture notes will be distributed by instructor.

MATLAB software will be used extensively for this course, including homework, midterm and final projects. The cost for MATLAB Student Version purchased from Mathworks is $50. In fact, a good reference book for this course is written by Cleve Moler, a founder of Mathworks, and is available at the link [http://www.mathworks.com/moler/chapters.html](http://www.mathworks.com/moler/chapters.html).

A free alternative of MATLAB is GNU Octave, which can be downloaded from their official website [https://www.gnu.org/software/octave/](https://www.gnu.org/software/octave/)

MATLAB and GNU Octave are almost identical, the same syntax, etc. The instructor will use GNU Octave for demonstration in class.

**Remote Learning Procedures:**

Live lectures will be given through Blackboard Collaborate Ultra Course Room at the scheduled class times: **Mon/Wed/Fri: 10am—10:50am.** Those live lectures will be recorded and can be viewed after class on Blackboard.

Lecture Presentation Slides will also be posted on Blackboard for convenience to follow the lectures.

**Grading Policy:**
There are no in-class midterm and final exams for this course. The final letter grade will be determined by your points earned from homework (40 pts), mid-term project (30 pts), and final project (30 pts):

A (90 pts or above); B (80 or above); C (70 or above); D (60 or above); F (less than 60).

Points earned from your homework and projects will be posted on Blackboard. The final letter grade will be posted through FlashLine at the end of semester.

**REGISTRATION REQUIREMENT:** The official registration deadline for this course is **September 2, 2020**. University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashFast) prior to the deadline indicated. Registration errors must be corrected prior to the deadline.

The last day to withdraw is **November 4, 2020**. Other important Registrar dates can be found at [http://www.kent.edu/registrar/registrar-dates-term](http://www.kent.edu/registrar/registrar-dates-term).

**STUDENT ACCESSIBILITY POLICY:** University policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. **Please note, you must first verify your eligibility for these through Student Accessibility Services** (contact 330-672-3391 or visit [www.kent.edu/sas](http://www.kent.edu/sas) for more information on registration procedures).

**ADMINISTRATIVE POLICY AND PROCEDURES REGARDING STUDENT CHEATING AND PLAGIARISM:** University policy 3342-3-01.8 deals with the problem of academic dishonesty, cheating, and plagiarism. None of these will be tolerated in this class. The sanctions provided in this policy will be used to deal with any violations. For more information, refer to [http://www.kent.edu/plagiarism/](http://www.kent.edu/plagiarism/).