

Math 2552 - Syllabus (version of 4/2/2020)

Differential Equations, Georgia Tech Lorraine, 4 credit hours

Lectures: available online, Mon & Wed 11 am-12:30 pm (Atlanta time)

Recitations: available online, Tue & Thu 11:00-12:00 pm (Atlanta time)

Instructor Information

Instructor

Angela Pasquale

Email

angela.pasquale@univ.lorraine.fr
angela.pasquale@georgiatech-
metz.fr

Office Hours (BlueJeans)

Mon & Wed, 11 am-12:30
pm (BlueJeans); Thu 11
am-12 am (BlueJeans) -
provided a test is not
planned-, or by
appointment.

Teaching Assistant

Soufiane Karrakchou

Email

soufiane.karrakchou@gatech.edu

Office Hours & Location

Tue 11:00 am-12:00 pm
(BlueJeans).

Course Requirements & Grading

There will be five quizzes (15-20 minutes), two midterms (50 minutes), and a comprehensive final exam (2 hours 50 minutes). **Only the four best quiz grades will be used for the course grade.**

Course grades will be assigned using the weights from the following table yielding the highest grade:

Assessment	Weight 1	Weight 2
Participation	2%	2%
Quizzes	18%	18%
Midterms	45%	35%
Final Exam	35%	45%

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

$90\% \leq A \leq 100\%$	$80\% \leq B < 90\%$	$70\% \leq C < 80\%$	$60\% \leq D < 70\%$	$0\% \leq F < 60\%$
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Description of Course Components and Procedures

Homework

Homework will consist of exercises from the textbook. It will not be collected nor graded. You are expected to understand all homework problems for quizzes, midterms and the exam.

Quizzes

There will be **five 20-minute quizzes**, usually given during the Thursday recitation sessions. The tentative dates are on the last page of this syllabus. Quizzes cover material up to and including

the most recent Monday lecture. They consist of questions similar (but not equal) to those from the lectures and the recitation. Solutions to quizzes and midterms will be posted on the course website.

Quizzes are posted on Canvas at a pre-fixed time and the solutions have to be returned by email. Quiz 3 (for the students who have to take it) and Quiz 5 are due 1 hour and 15 minutes after the beginning of the quiz.

Quiz 3 starts on Thursday, April 2, at 11:00 am (Atlanta time).

Quiz 5 starts on **Wednesday, April 15**, at 11:00 am (Atlanta time).

Quiz 4 is take-home, sent you on Sunday, March 29, and due Saturday, April 4 at noon (Atlanta time).

Quiz coverage:

Quiz 3 (Lectures of February 3, 5, 10, 12)

Chapter 3: Systems of two first order linear equations, Sections 3.1 to 3.5, (not the graphical methods covered in the lectures on March 2 and 4)

Chapter 6 : Systems of first order linear equations, Section 6.1, 6.2, 6.3, 6.4

Quiz 4 (Lectures of March 2, 4, 9)

Chapter 3: Systems of two first order linear equations, Sections 3.2 to 3.5 (graphical methods), section 3.6.

Chapter 4: Second order linear equations, Sections 4.1, 4.2, 4.3

Quiz 5

Chapter 5: The Laplace Transform: Sections 5.1, 5.2, 5.3, 5.4, 5.5, 5.6

Midterm 2

This is a 50-minute midterm, given during on **Monday, April 6, at 10:30 am** (Atlanta time) lecture. It has to be returned by email by **12:30 pm** (Atlanta time).

Midterm 2 will cover the following sections:

Chapter 3 (sections 3.1 to 3.6),

Chapter 6 (sections 6.1 to 6.4)

Chapter 4 (sections 4.1 to 4.5, 4.7)

Final Exam

The Final Exam is comprehensive. Its duration is 2 hours and 50. **It has to be returned by email after 4 hours and 30 minutes from its beginning.**

Its date and time will be fixed by the registrar and cannot be modified (Finals Week is April 23-30). See <http://www.registrar.gatech.edu/students/exams.php>

Participation

A subjective assessment will be based on your “participation” in the course - examples include attendance, preparation, quality of work handed in, creativity, progress of test scores, participation in classroom discussion (engage, lead, listen, inquire, challenge, respect, etc), engagement in/commitment to course, outlining alternative methods to solve a problem, solving challenge problems. Throughout the semester a variety of participation activities will be integrated into lectures and recitation sessions. Their purpose is to encourage active learning, foster community among students, offer feedback to the instructor on student understanding and course activities, and help students become more aware of their level of understanding of the course material. Participation activities will not be held in the first and last weeks of the semester. They will only be graded for completion (not for accuracy).

Exam/Quiz Rules (modified)

- Calculators, cell phones and other devices are not allowed to solve the exercises in the quizzes, midterms and the final exam except for Quiz 4.
- In midterms and in the final exam, unless you are asked to use a particular method or theorem, you are allowed to use any approach to solve the problems.
- Unless indicated otherwise, you must adequately justify your reasoning for full marks.
- Marks can be taken off in a midterm or final exam for not using the correct notation.
- Graded student quizzes and exams will be returned **by email** within one week.
- **Midterm 2, Quiz 3 (make-up), Quiz 5, and the Final Exam are take-home assessments with time limits.**
 - **Problems will be released on CANVAS at a pre-announced time.**
 - **You have to solve the problems by yourself; you are not allowed to discuss problems and solutions with other people.**
 - **During the time interval from the release time and submission deadline, I will be online. If you have questions about the exam, you can send me CANVAS messages or email messages.**
 - **You will scan your solutions into a PDF file and email it to angela.pasquale@univ-lorraine.fr or to angela.pasquale@georgiatech-metz.fr by the pre-announced deadline.**
 - **For students with double time, the deadline of submission is postponed by an amount of time equal to the duration of the test.**

Course Materials

Textbook

Differential Equations: An Introduction to Modern Methods & Applications, by James R. Brannan and William E. Boyce (3rd edition), John Wiley and Sons, Inc.

We will roughly cover Chapters 1 through 8 of the textbook.

Additional Materials/Resources

Office hours are important for discussing material covered in class, getting help to solve homework assignments, asking for specific or personalized help, and discussing about difficulties. Please come to office hours. If you cannot come at the fixed schedule, we can fix an appointment at a different time. Additional practice material and extended office hours will be offered prior to midterms and to the final exam.

Course Website

<http://www.iecl.univ-lorraine.fr/~Angela.Pasquale/courses/2019/Math2552/Spring20.html>

The course website includes lecture materials, homework assignments and course-related documents. You are responsible for keeping up with emails to your student account as well as for reading announcements and downloading course material from the course webpage.

Course Expectations & Guidelines

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit

<http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz or exam will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you have learning needs that require some adaptations for you to succeed in this course, please contact the Office of Disability Services (<http://disabilityservices.gatech.edu/>) as soon as possible. We can arrange to accommodate your learning needs based on their recommendations.

Attendance and/or Participation

You are expected to attend and participate in all classes. Please try to be on time and do not leave early unless it is really needed. An absence does not relieve you of your responsibility for obtaining the material of the class you missed.

Collaboration & Group Work

Students are required to follow the Georgia Tech Honor Code which might be found at: <http://www.catalog.gatech.edu/policies/honor-code/>

Students are allowed and even encouraged to collaborate on homework assignments. Any help or assistance received must be acknowledged. Graded work in quizzes, midterms and the final exam must be personal work, not copied from anywhere else (included solution manuals and internet sources).

Scheduled/Missed Exams

In general, no make-up exams will be given and any missed exam results in a "0" score.

- If you have a valid reason to request a make-up exam, please contact your instructor as early as possible. Only extraordinary cases will be considered.
- In the event of a medical emergency or an illness that is severe enough to require medical attention, students are responsible for contacting the Office of the Dean of Students as soon as possible to report the medical issue or emergency, providing dated documentation from a medical professional and requesting assistance in notifying their instructors. It is the expectation of the Institute that instructional faculty will honor a request from the Office of the Dean of Students to excuse a medical emergency or illness and allow make-up of the work missed, including quizzes, midterms and the final exam.
- Students who will miss a midterm or final exam due to a university-sponsored event or athletics should provide their instructor with the official documentation in advance. Any student who misses a quiz or midterm, with reasonable explanation, can write a make-up. Students must notify their instructor as soon as they can to make necessary arrangements.
- Students who are absent because of participation in a particular religious observance will be permitted to make up the work missed during their absence with no late penalty, provided the student informs the instructor of the upcoming absence, in

writing, within the first two weeks of class, and provided the student makes up the missed material within the timeframe established by the course instructor.

Re-grade Requests for Midterms and Quizzes (unchanged)

- If any of your work has been graded in error, you should contact your instructor as soon as possible. Re-grade requests must be submitted within two weeks after the work has been returned to you.
- A re-grade request can only be submitted if you did something correct that was marked as incorrect.
- You must check your answers with the solutions before submitting such a request.
- Teaching assistants are not permitted to handle re-grade requests.
- Should you wish to have your work re-graded, please do not change or add to the work on your paper.
- To submit a re-grade request, you must send your instructor an email from your GT email account that contains your first and last name, the midterm you are referring to, the question(s) you are referring to, and a description of what was graded incorrectly.

Student-Faculty Expectations Agreement (unchanged)

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Your feedback is important to me. Please talk to me about things I can do, start, stop and/or continue doing to make my classroom an environment in which every student feels valued and can engage actively in our learning community.

Student Use of Mobile Devices in the Classroom

Cell phones should be silent and put away during classes. Devices like tablets or laptops can be used for the only purpose of taking notes, as long as this is not distracting to the other students.

Campus-Wide Dates

Jan 7, 2020	First day of class
Jan 17 (noon, Atlanta time)	Progress Report Deadline
Mar 11	Withdrawal Deadline: last day to withdraw with a grade of "W"
Feb 24 - 29	GTL Spring Recess
Apr 20 - 21	Final Instructional Class Days
Apr 22 (all day), Apr 23 and Apr 28 (8:00 am - 2:40 pm)	Reading Periods
April 23 - 30	Final Exam Period
May 4, 2020	Final Grade Submission Deadline (noon, Atlanta time)

For further information on campus-wide dates see

<http://www.registrar.gatech.edu/calendar>

The schedule of the final exam will be fixed by the registrar and is not negotiable. See

<http://www.registrar.gatech.edu/students/exams.php>

Tentative Course Schedule

The schedule below is tentative and might subject to. Possible changes will be announced in class and on the course website.

Week 13 Mar 30-Apr 3	4.4, 5.1, 5.2, 5.3	Quiz 3 (make-up, Th Apr 2) Quiz 4 (due Sat, Apr 4)	
Week 14 Apr 6 - 10	5.4, 5.5, 5.6	Midterm 2 (Mon, Apr 6)	
Week 15 Apr 13 - 17	7.1, 7.2, 7.3, 7.4	Quiz 5 (Wed, Apr 15)	
Week 16 Apr 20 - 22	Final Instr. Day (Apr 20) 8.1, 8.2, 8.3	Review for Final Exam	
Apr 23 - 30	Final exams		

Tentative Recitation Schedule (BlueJeans, 11 am to 12 pm)

Tue, Mar 31

Tue, Apr 7

Tue, Apr 14

Tue, Apr 21