Course Information
Math 3350–101, Higher Math for Engineers and Scientists
Summer I, 2016
CRN 31897

June 6, 2016

Instructor: Prof. Lance D. Drager. Office: Math 236. Office Phone: (806)834-8161. If you let the office phone ring long enough, you'll get me or a voice mail system you can leave a message on. My e-mail address is lance.drager@ttu.edu. Course materials will sometimes be posted on my web page, which is http://www.math.ttu.edu/~drager.

Announcements and Class Forum: This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. You can post a question anonymously, if you want. If you have any problems or feedback for the developers, email team@piazza.com. I will look at this at least once each business day.

Sign up for our site at ppiazza.com/ttu/summerterm12016/math3350101
Find our class page at piazza.com/ttu/summerterm12016/math3350101/home
I will also post class announcements (including assignments) on Piazza, so check it to see what is happening.

If your message is not of general interest to the class, or you want to keep it private, send it to me privately or use my regular email (email address above). Piazza has an equation editor for entering mathematics in your posts. Alternatively, you can enter formulas in \LaTeX. There are a lot of websites that have editors that produce \LaTeX formulas, which you can paste into your post.

Office Hours: M–F 2:00pm–5:00pm, unless I have an appointment. I’ll post a note on my door if I am not going to be in. You can come by outside of formal office hours; I’ll usually have time to talk to you. Please feel free to come by if you need help.
If you’re coming to my office from far away, you can call my office phone (above) to see if I’m in.

We have a TA for this course. The TA’s office hours will be announced in class.

**Other Sources of Help:** The Mathematics Department Office has a list of people who offer tutoring for pay. Forming informal study groups with other students can be very helpful. I encourage you to ask me questions, and I encourage students to work together in room 238 during my office hours when I can help. You can also go to the TA, whose office hours will be announced in class.

**Text:** The text is Dennis G. Gill and Warren S. Wright *Advanced Engineering Mathematics, Fifth Edition*, Jones and Bartlett, Boston, 2011. There is a 4th edition; it doesn’t make much difference. If you have the 4th edition, we’ll work around the differences, it’s not worth buying the book twice.

The sections to be covered are 1.1–1.2, 2.1–2.8, 3.1–3.6, 3.8, 4.1–4.5, 5.1, 5.3.

**Calculator:** A TI-89 or better calculator is required for this class. You will need it on exams! To check if a different model of calculator is acceptable, show it to the instructor.

**Learning Outcomes:** Math 3350 students will study topics of differential equations, their solutions, and applications to physical sciences and engineering. In particular the students will learn to:

- recognize a differential equation and its solution
- compute solutions of first order differential equations
- compute solutions of higher order differential equations
- use Laplace transforms
- the fundamental properties of power series, and how to use them to solve linear differential equations

**Assessment of Learning Outcomes:** The assessment of student’s mastery of the skills and concepts as specified in the expected learning outcomes will occur, with appropriate course grades assigned, as follows:

1. 2 in-class exams.
2. The final exam.
4. Homework.

The two in-class exams and the final will be equally weighted. (No exam is dropped.) I will apply a curve on each exam, so you can compare your scores with the usual grade lines.
The procedure for the exam corrections will be discussed in class after the first exam.

The 90-80-70-60 cut offs will be sufficient for the final grade, but the cutoffs may go a bit lower; I can’t say until I see all the scores.

The exams will count for 55% of the final grade; the exam corrections count 15% and the homework counts for 30%.

The homework will be mostly on the Webwork system, but there will be some pencil and paper assignments. (Please wait for an announcement before trying to get on Webwork.)

If you need help getting started on a problem you are highly encouraged to talk with me. You may discuss the homework problems with your classmates, but after understanding how to do it, go off by yourself and write up the assignment; don’t just copy someone else’s writeup.

**Final Exam:** The final exam is on Friday, July 8, from 8:00am to 10:30am. It will be in our usual classroom.

**Makeups:** If you are absent from an exam and convince me that your reason was legitimate, I will give a makeup exam. For late homework I may require a serious, legitimate excuse.

**Class Schedule:** The tentative schedule for the class is as follows:

- **June 7**  Chapter 1, Introduction to Differential Equations
- **June 8–June 13**  Chapter 2, First-order Differential
- **June 14–June 20**  Chapter 3, Higher-Order Differential Equations
- **June 17**  Exam 1
- **June 21–June 24**  Chapter 4, The Laplace Transform
- **June 27**  Exam 2
- **June 28–June 29**  Chapter 5, Series Solutions of Linear Differential Equations
- **June 30–July 7**  Special Topics and Review
- **July 4**  University Holiday
- **July 8**  Final exam, 8:00am–10:30am.

If these dates are changed, the changes will be discussed in class and will appear on the calendar on my website. However, **this document will not be changed.**

**Class Attendance:** To begin with, I will not count attendance towards the grade, although I may pass out a sign up sheet to check the class roll. **Many studies show attendance is very important to getting a good**
grade. This is especially true in summer session, where the material is covered very rapidly.

If necessary, I will institute an attendance system!!

Note that University policy states that five absences is sufficient reason to drop a student from the course.

Remember, you are responsible for all material covered in class and all announcements made in class or on Piazza. If you have to miss a class, you should check with Piazza and me or a classmate to see what happened.

Formative Assessment: Continuous formative assessment of the progress of the course will occur via ongoing communication between the instructor and the students. To this end, all students are encouraged to ask questions during class and to seek the instructor’s help out of class when needed. Other activities in support of student-instructor communication will include: practice exams and quizzes, review of homework, and personal interviews with students doing poorly on work assigned at the beginning of the course.

Identification: You should be prepared to show your Texas Tech picture ID at any quiz or exam.

Accommodations for Disabilities: Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make necessary accommodations. Students should present appropriate verification from Disabled Student Services, Dean of Students Office (AccessTECH). No requirement exists that accommodations be made prior to completion of this approved University process.

Religious Holy Days: A student may be absent from class for a religious holy day, as legally defined, and will be allowed to make up any missed examination or assignment within a reasonable time after the absence. See [http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php](http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php)

Academic Misconduct: It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own work any work that they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension.

For more information, and a description of what is considered to be misconduct, see [http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php](http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php)

Civility in the Classroom: Students are expected to assist in maintaining a classroom environment that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class, unless otherwise approved by the instructor, students are prohibited from engaging in any other form of distraction. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class.

For more information, see [http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php](http://www.depts.ttu.edu/officialpublications/catalog/_AcademicsRegulations.php)
I interpret this to mean that you should not use phones, computers or other gadgets unless you are using them to take notes, work problems, or otherwise assist you with learning the material being covered.