

PRACTICAL INFORMATION

Class hours: TR 11:00–12:20 pm

Class room: PETRE 116

Instructor: Lars Winther Christensen

Office: MATH 251

Office hours: T 9:00–10:30 am and 3:30–5:00 pm, W 4:00–6:00 pm, and R 9:00–10:30 am,
or by appointment

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Course homepage: www.math.ttu.edu/~lchrste/teaching3350112014.html

COURSE DESCRIPTION

This course covers topics in ordinary differential equations, including:

- First-order differential equations
- Modeling with first-order differential equations
- Higher-order differential equations
- Modeling with higher-order differential equations
- Laplace transform
- Series solutions to linear equations

Required text. “Advanced Engineering Mathematics” 3rd edition by Dennis G. Zill and Michael R. Cullen, published by Jones & Bartlett.

Prerequisites. Math 2350.

Expected learning outcomes. Students learn to understand the concept of differential equations, their solutions, and applications to physical sciences and engineering. Concepts and skills to be mastered by the students include but are not limited to the following.

- Recognize a differential equation and its solution
- Compute solutions to first-order differential equations
- Compute solutions to linear differential equations
- Use the Laplace transform
- Find numerical solutions to differential equations

LEARNING ASSESSMENT

Graded assessment is done through homework and exams. Other assessment techniques will also be used; these include direct questioning, problems to be solved in class, and discussions during office hours. Additionally, problems will be assigned for student self-assessment. The homework problems will be assigned out of the textbook and an online test bank; they will be chosen such that they facilitate the students’ development of skills in solving ordinary differential equations. Exam problems will be constructed such as to test if the students have acquired the skills listed (•) above.

COURSE ORGANIZATION

The plan is to cover (in order) sections 1.1–1.2, 2.1–2.8, 3.1–3.6, 3.8, 5.1, 5.3, and 4.1–4.5. Precise reading assignments will be posted on the course homepage, which is updated after every class.

Exams. In-class exams take place on 24 Feb. and 7 April. The final is on 9 May, 1:30–4:00 pm.

Other important dates.

Martin Luther King Jr. Day	17 Jan.
Last day to drop a course without penalty	28 Jan.
Spring Vacation	12–20 Mar.
Last day to drop a course	23 Mar.
Last day to withdraw	28 April

ASSIGNMENTS, GRADES, AND GRADING

The final exam is comprehensive. Two in-class exams are given during the semester. Homework will be assigned 12 times during the semester and is due on Thursdays. Results and grades are posted at www.blackboard.ttu.edu.

Grading policy. On exams and written homework, partial credit for correct steps will be awarded even if the final answer is wrong. Full credit will be given only if the final answer and all intermediate steps are correct. A correct final answer *per se* does not guarantee any credit.

Deadlines and make ups. Homework is not accepted after the deadline. In-class exams cannot be made up; the final exam serves as make-up for exams that were missed for legal reasons.

Final grade. Homework (10 assignments) and exams (3) are counted towards the final grade with weights as follows: homework 30% (3% ea.), in-class exams 40% (20% ea.), and final exam 30%.

GENERAL POLICIES

Academic integrity. It is the aim of the faculty of TTU to foster a spirit of complete honesty and a high standard of integrity. Any attempt of students to present as their own any work that they have not honestly performed is regarded by faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension. Please see more information on-line at www.depts.ttu.edu/studentaffairs/CampusCrime/documents/integritymatters.pdf.

Civility in the classroom. You are expected to be courteous to me and your fellow students. This means that your cell-phone should be turned off during the class; you shall not chat with your friends during class, eat meals or snacks, or cause a distraction in any other way.

Officially approved trips. Students are allowed to miss class for trips officially sanctioned by TTU. The student must notify the instructor of upcoming trips and present written authorization.

Religious holy days. You are allowed to take the time to travel and observe a religious holy day. Prior notice should be given at least 1 day before the absence.

Students with 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 any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2405.