

Differential Equations (MATH 30613-010) in Fall 2012

Room	Time
WIN 145	MWF 9–9:50 AM
Instructor	E-mail
Loren Spice	l.spice@tcu.edu
Office	Office hours
TUC 315	MTuW 10–10:50 AM F 8–8:50 AM and by appointment

TCU Online
tcuglobal.edu

Textbook Blanchard, Devaney, and Hall, *Differential equations*, with [printed DETools access card](#).

Attendance Attendance is **required**. You **must** sign the attendance sheet **each class**, or you may be marked absent. Attendance can earn up to 1 bonus point on each exam. See the expanded syllabus on the course web-page.

Grading Course components will be weighted as follows:

Homeworks	Midterms	Final
25%	15% each (45% total)	30%

You can see your current weighted percentage on the course web-page at any time. If you think that a grade has been mis-computed, you **must** talk to me within 1 week of its being recorded.

Your course grade will be determined as follows:

Min. %	Min. Grade	Min. %	Min. Grade	Min. %	Min. Grade
90%	A-	94%	A		
80%	B-	84%	B	87%	B+
70%	C-	74%	C	77%	C+
60%	D-	64%	D	67%	D+

If you have earned less than 60% of the course credit, then you may receive an F. Exam and course grades may be curved.

Course goals

- Understand why differential equations are an appropriate tool for modelling real-world problems.
- Create and understand mathematical models of physical phenomena.
- Develop tools and techniques for solving differential equations, and interpreting their solutions.

We will also explore the theoretical, mathematical underpinnings of the subject of differential equations.

We will try to cover most of Chapters 1–4, and 6. Specific highlights of these chapters include separation of variables; change of variables; integrating factors; systems of linear equations, including eigenvalues and eigenvectors; springs and forced oscillation; and Laplace transforms.

See reverse for course details.

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Academic Conduct You must comply with the University's academic-conduct policies at http://www.catalog.tcu.edu/current_year/undergraduate/1411.htm. See the expanded syllabus on the course web-page.

Calculators and technology A graphing, but not a symbolic, calculator is **required** for the class (although it may be **forbidden** for selected problems). See the expanded syllabus on the course web-page.

DETools is also **required** for the class. A printed access card should be included with your textbook.

Homeworks Homeworks will be posted on the course web-page. Homeworks must be handed in to me **in person**. If you are not able to do so, then you may have a friend hand it in, or e-mail me a scanned copy by the due time. If an Official Absence will interfere with a due date, please let me know **in advance** so that we can make an appropriate adjustment. **Late** homeworks will not be accepted.

You may work with classmates on the homeworks, but you must write up your own work **independently**. Homeworks are due by the **end** of office hours or the **beginning** of class, whichever is later, on the class after they are assigned. The lowest homework grade will be dropped.

You should budget about **10 hours** per week for reviewing notes and doing homework. You **cannot** earn better than a C, regardless of exam scores, without satisfactory homework and quiz grades.

Midterms Midterms will be held in class on Fridays: **September 21; October 19; and November 16.**

Re-scheduling of exams will be provided **only** in case of an Official Absence; or at my discretion, for extreme, documented reasons. In either case, you must tell me **one week** in advance, or as soon as is reasonably possible.

The final exam will be **Monday, December 10, 8–10:30 AM**, in a location to be announced. The time is set by the registrar, and **not** subject to change. **Travel plans** are not a sufficient reason to miss a final.

Disability policy This course complies with the University disability statement at <http://www.ugradcouncil.tcu.edu/forms/DisabilitiesStatement.doc>. See the expanded syllabus on the course web-page.