MATH 321 Differential Equations Spring 2012
South Dakota School of Mines and Technology
3 credits
1:00 - 1:50 MWF M 306

INSTRUCTOR: Julie Dahl
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Office hours: 9:00-9:50 MTWF, 2:00-2:30 MW
TEXT: Differential Equations with Boundary-Value Problems by Zill and Cullen 7th Edition

Web access for this class is through D2L, which can be accessed at http://d2l.sdbor.edu

Although a tablet computer is not strictly required for this section, it is strongly recommended, since lecture notes are provided in Windows Journal to allow you to take notes electronically, and you will be required to submit homework - electronically if at all possible.

On D2L, you will find announcements, exam dates, assignments, reviews, etc. This course is delivered by in-class lecture and is not intended to be a distance course. Attendance is expected but not required; however, as noted below, homework is collected almost every day and late homework is not accepted. You will be submitting your daily homework assignments via the D2L site.

MATH 321 DIFFERENTIAL EQUATIONS

(3-0) 3 credits. Prerequisites: MATH 125 with a minimum grade of "C." Selected topics from ordinary differential equations including development and applications of first order, higher order linear and systems of linear equations, general solutions and solutions to initial-value problems using matrices. Additional topics may include Laplace transforms and power series solutions. MATH 225 and MATH 321 may be taken concurrently or in either order. In addition to analytical methods this course will also provide an introduction to numerical solution techniques.

MATERIAL TO BE COVERED IN COURSE:
Week 1 Chapters 1 and 2 - terminology

Weeks 2-4 Chapters 2, 3 and 9 - solving first order differential equations, numerical techniques, applications of first order diff. eqs.
Weeks 5-7 Chapters 4 and 5 - solving second order diff. eqs, applications of second order diff. eqs.
Weeks 8-11 Chapter 7 - Laplace transforms
Weeks 9-15 Appendix II, Chapter 8 - eigenvalues,eigenvectors, solving systems of equations

The final exam is scheduled for Wednesday, May 2 from 3:00 PM until 4:50 PM
GRADING POLICIES:
Grades will be based on 3 exams, a mandatory comprehensive final exam, and homework. Homework is picked up every day. One make-up exam per semester will be allowed only if the student has notified the instructor in advance of or on the day of the exam with a good reason for missing the test. There will be several computer assignments during the semester, and if you choose to submit fewer than half of them, a penalty will be assessed as follows: the number of points assigned for all the computer assignments will be quadrupled. For example, if there are 3 Maple assignments worth a total of 25 points, and you only submit one of the three, earning a score of 6, you will be penalized. Those assignments are now worth 100 points, and instead of getting 6/25 for your computer score, you will get 6/100.

Because the total number of points can vary from semester to semester, the following percentages are approximations.

Tests One-Three - 18-20% each
Homework - 13-15%
Final Exam - 25-30%

GRADING SCALE:

90 - 100 % A
80 - 90 % B
70 - 80 % C
60 - 70 % D
0 - 60 % F

HOMEWORK POLICY:

Homework must be saved as a Windows Journal file and submitted via D2L. Each assignment is worth 2 points (so will be assigned a score of 0, 1, or 2). Score on each assignment is based on level of completion of assignment. Five assignments will be thrown out for everyone.

- No makeups
- No late assignments
- No excused homeworks

If you don’t submit an assignment, it’s one of the 5 dropped assignments. Approximately 25 assignments will be collected.
BEHAVIOR IN CLASS, ELECTRONIC DEVICES POLICY, AND CHEATING: During lectures, minimize conversations with your classmates. If you consistently violate this policy, you may be asked to exit the room.

The use of electronic devices such as cell phones, mp3 players, etc. in class is not acceptable. Turn them off before coming to class. **No text messaging in class.** No headphones. If you wish to use a laptop in this class for purposes of note taking, that’s great; however, it should be in tablet mode, with the lid rotated and down, and you are not allowed to use the computer to communicate with other students during class. No other use of any other electronic/computer media is allowed during class time.

Note that according to “Policy Governing Academic Integrity” in the SDSM&T Undergraduate Catalog, the instructor of record for this course has discretion of how acts of academic dishonesty are penalized, subject to the appeal process, and that “Penalties may range from requiring the student to repeat the work in question to failure in the course.”

In addition, for this class, **if you cheat on an exam or assignment, you could fail the course. You will not receive any credit for that assignment, and your name may be turned in to the Dean of Students. Working together and discussing homework is acceptable. Copying someone else’s work is cheating.** For more information on this topic, refer to the college catalog for the policy governing academic integrity.

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For information about objectives and outcomes for this course and other courses in the Math department, go to the following page [http://www.mcs.sdsmt.edu/view.php?p=3600](http://www.mcs.sdsmt.edu/view.php?p=3600)

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**Freedom in learning.** Under Board of Regents and University policy student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact the dean of the college which offers the class to initiate a review of the evaluation.

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**Students with special needs or requiring special accommodations should contact the instructor, (Julie Dahl at 355-3456) and/or the campus ADA coordinator, Jolie McCoy, at 394-1924 at the earliest opportunity.**