

# Differential Equations and Linear Algebra

Grade Sheet with Due Dates and Lectures Fall 2010

2250-4 12:25pm in JWB 335

Midterm 1 [20,22 Sep, 27,29 Sep]

Av1=

Midterm 2 [25,27 Oct, 1,3 Nov]

Av2=

Midterm 3 [15,17 Nov, 29 Nov, 1 Dec]

Av3=

Final Exam [Dec 15 or 17]

AvFin=

Average of dailies including maple labs:

AvDaily=

Final Grade:  $\frac{70}{100} \left( \frac{Av1+Av2+Av3+AvFin+AvFin}{5} \right) + \frac{30}{100} AvDaily =$

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## Policies on Dailies and Exams

**Policy on Dailies:** The highest 146 dailies will be counted. The lowest 6 of the 152 dailies will be dropped. Any record with less than 60 dailies earns a grade of **E**, regardless of midterm and final exam scores. Deadlines set at web site [www.math.utah.edu/~gustafso/](http://www.math.utah.edu/~gustafso/). Work not in the stack sent to the assistant earns a grade of zero. Extra credit exercises can correct these zeros.

**Policy on Exams:** The final exam is doubled before determining the exam average, to count like two midterms. The effect can be imagined as five midterm scores, averaged to obtain the semester exam score average.

**Policy on Rank-in-Class:** The class ranking is determined only by the exams. Rank 1 is the best, determined by sorting on the exam average  $(mid1+mid2+mid3+final+final)/5$ . There is no influence on class standing from dailies.

**Dailies and Letter Grade:** The dailies affect only the final letter grade assigned. A grade of *E* is assigned for less than 60 dailies. Otherwise, dailies contribute 30% towards the letter grade. In extreme cases, the influence is  $\pm$  one letter grade, e.g., *B-* on exams changes from *C-* to *A-*.

**Grading Scale:** The internally-used scale is uses GPA increments, which step  $1/3$  from  $0.0 = E$  to  $4.0 = A$ . Briefly,  $A = 95$ ,  $B = 82$ ,  $C = 67$ ,  $D = 52$ . In detail:

A = 95-100, A- = 90-94, B+ = 85-89, B = 80-84,  
B- = 75-79, C+ = 70-74, C = 65-69, C- = 60-64,  
D+ = 55-59, D = 50-54, D- = 45-49, E = 0-44.

## Tentative Due Dates and Lectures 2250-4 12:25pm Fall 2010

### Week 1, Aug 23 to 27

Lecture 1.1, 1.2, 1.3, 1.4.

23 Aug, Intro 12:55pm, Mon. Teaching assistant, Kordy. Discuss maple lab1.

24 Aug, Intro, GB Gustafson, nothing due.

25 Aug, Intro 12:55pm, Wed. Teaching assistant, Kordy. Discuss maple lab1.

26 Aug, Submit 1.2-2 for quick review.

30 Aug, Mon lab: Quadratics, partial derivative, Jacobian, maple lab 1.

Exam 1 review. Drill, Q&A ch1.

31 Aug, Nothing due.

01 Sep, Wed lab: Quadratics, partial derivative, Jacobian, maple lab 1.

Exam 1 review. Drill, Q&A ch1.

02 Sep, LCB115: Time TBA, First maple intro.

02 Sep, Page 16, 1.2: 2 , 4 , 6 , 10

02 Sep, Page 26, 1.3: 8 , 14

02 Sep, Page 41, 1.4: 6 , 12 ,

### Week 2, Aug 30,31, Sep 1 to 3

Lecture 1.5, 2.1, 2.2, 2.3.

18 , 22 , 26   
03 Sep, LCB115: Time TBA, Repeat maple  
intro.

### Week 3, Sep 6 to 10

Lecture 2.4, 2.5, 2.6.

06 Sep, Labor Day holiday, no classes.  
07 Sep, LCB115: Time TBA. Repeat maple  
intro.  
07 Sep, Nothing due.  
08 Sep, Wed lab: Discuss maple lab L2.1. Exam  
1 review. Drill, Q&A ch1.  
09 Sep, Page 54, 1.5: 8 , 18 ,  
20 , 34   
09 Sep, Page 86, 2.1: 8 , 16   
09 Sep, Page 96, 2.2: 10 , 14

### Week 4, Sep 13 to 17

Lecture 3.1, 3.2, 3.3.

13 Sep, Mon lab: Exam 1 review. Discuss maple  
lab2.  
14 Sep, Nothing due.  
15 Sep, Wed lab: Exam 1 review. Discuss maple  
lab2.  
16 Sep, Page 106, 2.3: 10 , 20   
16 Sep, Submit Exam Review problems ER-1  
, ER-2   
16 Sep, Submit Maple lab 1:  
L1.1 , L1.2 , L1.3 , L1.4

### Week 5, Sep 20 to 24

Lecture 3.4, 3.5, 3.6.

20 Sep, Mon lab: Midterm 1, problems 1,2,3.  
21 Sep, Submit maple L2.1 copy for quick review.  
22 Sep, Wed lab: Midterm 1, problems 1,2,3.  
23 Sep, Page 152, 3.1: 6 , 16 , 26   
23 Sep, Page 162, 3.2: 10 , 14 , 24   
23 Sep, Page 170, 3.3: 10 , 20

### Week 6, Sep 27 to 30, Oct 1

Lecture 4.1, 4.2, 4.3, 4.4.

27 Sep, Mon lab: Discuss maple lab 2. Midterm  
1, problems 4,5  
28 Sep, Nothing due.  
29 Sep, Wed lab: Discuss maple lab 2. Midterm  
1, problems 4,5  
30 Sep, Page 182, 3.4: 20 , 30 ,  
34 , 40

30 Sep, Page 194, 3.5: 16 , 26 ,  
44

### Week 7, Oct 4 to 8

Lecture 4.4, 4.5, 4.6, 4.7.

04 Oct, Traveling? Submit this weeks work on  
Wed or Thu.  
04 Oct, Mon lab: Exam 2 Review. Drill, Q&A  
Ch3.  
05 Oct, Nothing due.  
06 Oct, Wed lab: Exam 2 Review. Drill, Q&A  
Ch3.  
Discuss maple L3.  
07 Oct, Page 212, 3.6: 6 , 20 ,  
32 , 40 , 60   
07 Oct, Page 233, 4.1: 16 , 20 , 32   
07 Oct, Page 240, 4.2: 4 , 18 , 28

### FALL BREAK, Oct 11 to 16

Happy holiday!

### Week 8, Oct 18 to 22

Lecture 5.1, 5.2, 5.3, 5.4.

18 Oct, Mon lab: Exam 2 review.  
Discuss maple lab3 and lab4.  
19 Oct, Submit maple lab 2:  
L2.1 , L2.2 , L2.3 , L2.4   
20 Oct, Wed lab: Exam 2 review.  
Discuss maple lab3 and lab4.  
21 Oct, Page 248, 4.3: 18 , 24   
21 Oct, Page 255, 4.4: 6 , 24   
21 Oct, Page 263, 4.5: 6 , 24 , 28

### Week 9, Oct 25 to 29

Lecture 10.1, 10.2, 10.3, 10.4

25 Oct, Mon lab: Midterm 2, problems 1,2,3:  
ch3,4,5.1-5.3  
26 Oct, Page 271, 4.6: 2   
26 Oct, Page 278, 4.7: 10 , 20 , 26   
27 Oct, Wed lab: Midterm 2, problems 1,2,3:  
ch3,4,5.1-5.3  
28 Oct, Page 294, 5.1:  
34 , 36 , 38 , 40 ,  
42 , 46 , 48   
28 Oct, Page 306, 5.2: 18 , 22   
28 Oct, Page 319, 5.3: 8 , 10 ,  
16 , 32

**Week 10, Nov 1 to 5**

Lecture 10.5, EPbvp7.6, 5.5

01 Nov, Mon lab: Discuss maple lab5. Midterm 2, problems 4,5: ch3,4,5.1-5.3

02 Nov, Nothing due.

03 Nov, Wed lab: Discuss maple lab5. Midterm 2, problems 4,5: ch3,4,5.1-5.3

04 Nov, Page 331, 5.4: 20 , 34 04 Nov, Page 576, 10.1: 18 , 28 04 Nov, Page 588, 10.2: 10 , 16 , 24 **Week 11, Nov 8 to 12**

Lecture 5.6, EPbvp3.7, 6.1, 6.2

08 Nov, Mon lab: Exam 3 review. Discuss maple lab6 and lab7.

09 Nov, Submit maple lab3:

L3.1 , L3.2 , L3.3 

09 Nov, Submit maple lab4 :

L4.1 , L4.2 , L4.3 

10 Nov, Wed lab: Exam 3 review. Discuss maple lab6 and lab7.

11 Nov, Page 597, 10.3: 6 , 18 11 Nov, Page 606, 10.4: 22 **Week 12, Nov 15 to 19**

Lecture 7.1, 7.2, 7.3, 7.4.

15 Nov, Mon lab: Midterm 3, problems 1,2,3: ch5, ch10, ch6

16 Nov, Page 616, 10.5: 4 , 22 , 28 16 Nov, Page 510 in EPbvp 7.6: 8 , 22 

17 Nov, Wed lab: Midterm 3, problems 1,2,3: ch5, ch10, ch6

18 Nov, Page 346, 5.5: 54 , 58 ,6 , 12 , 22 18 Nov, Page 357, 5.6: 4 , 8 , 18 18 Nov, Page 227 in EPbvp 3.7: 4 , 12 **Week 13, Nov 22 to 26**

Lecture 7.5 /w Laplace, 8.1, 8.2.

22 Nov, Mon lab: Discuss midterm 3 and maple lab6, lab7.

23 Nov, Submit maple lab5:

L5.1 , L5.2 , L5.3 23 Nov, Page 370, 6.1: 12 , 20 ,32 , 36 23 Nov, Page 379, 6.2: 6 , 18 , 28 

24 Nov, Wed lab: Discuss midterm 3 and maple lab6, lab7.

25-26 Nov, Thanksgiving Holiday, no classes.

**Week 14, Nov 29,30 and Dec 1,2,3**

Lecture 9.1, 9.2, 9.3.

29 Nov, Mon Lab: Midterm 3, problems 4,5: ch5, ch10, ch6

30 Nov, Submit maple lab6:

L6.1 , L6.2 , L6.3 

30 Nov, Submit maple lab7:

L7.1 , L7.2 , L7.3 , 7.4 

01 Dec, Wed Lab: Midterm 3, problems 4,5: ch5, ch10, ch6

02 Dec, Page 400, 7.1: 8 , 20 02 Dec, Page 413, 7.2: 12 , 14 02 Dec, Page 425, 7.3: 8 , 20 ,30 02 Dec, Page 438, 7.4: 6 , 24 **Week 15, Dec 6 to 10**

Lecture 9.4, Final Review.

06 Dec, Mon lab: Final exam review.

07 Dec, 8.1: 4 , 12 , 38 07 Dec, 8.2: 4 , 19 

08 Dec, Wed lab: Final exam review.

09 Dec, 9.1: 4 , 8 , 18 09 Dec, 9.2: 2 , 12 , 22 09 Dec, 9.3: 8 , 9 , 10 

10 Dec, Office hours and lectures finished.

13 Dec, Semester Extra Credit 9.4: 4 , 8 

13 Dec, Semester Extra credit Ch9, Ch10X and maple 8,9,10 due.

Deliver under the door 113jwb by 6pm.

11 Dec, Saturday: Special Final Exam review, 2pm, LCB 219

15 Dec, Final Exam.

See the online final exam study guide.

**Exam Period, Dec 15 and 17**

Final exam for the 7:30am class is Wed, Dec 15, 2010 from 8:00am to 10am [WEB 103] .

Final exam for the 12:25pm class is Fri Dec 17, 2010, 10:30am to 12:30pm [JWB 335].

**Extra Credit:** Under the door 113jwb Dec 13.

Ch9 Extra Credit. About 10 problems.

Ch10X Extra Credit. About 10 Laplace problems.

Maple Optional Lab 8: Earthquake [500]

Maple Optional Lab 9: Tacoma Narrows [200]

Maple Optional Lab 10: Brine and Glucose [400]

Extra credit records locked at 6pm on 13 Dec.

Ch9, Ch10X and maple 8,9,10 credits apply to the semester dailies total.