

# Differential Equations and Linear Algebra

Grade Sheet with Due Dates and Lectures Spring 2010

2250-1 7:30am in JTB 140

Midterm 1 [18 Feb]	Av1=	<input type="text"/>
Midterm 2 [18 Mar]	Av2=	<input type="text"/>
Midterm 3 [22 Apr]	Av3=	<input type="text"/>
Final Exam [May 5]	AvFin=	<input type="text"/>
Average of dailies including maple labs:	AvDaily=	<input type="text"/>
Final Grade:	$\frac{70}{100} \left( \frac{Av1+Av2+Av3+AvFin+AvFin}{5} \right) + \frac{30}{100} AvDaily =$	<input type="text"/>

Questions: 801-581-6879, Office: 113 JWB. Email [ggustaf@math.utah.edu](mailto:ggustaf@math.utah.edu)

## 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	=	90-94	=	85-89	=	80-84
B-	=	75-79	=	70-74	=	65-69	=	60-64
D+	=	55-59	=	50-54	=	45-49	=	0-44

## Tentative Due Dates and Lectures 2250-1 7:30am Spring 2010

<b>Week 1, Jan 11 to 15</b> Lecture 1.1, 1.2, 1.3, 1.4.	19 Jan, Nothing due. 20 Jan, Nothing due. 20 Jan, LCB115: Time TBA, First maple intro. 21 Jan, Cox and Murphy: Quadratics and maple lab 1. Exam 1 review. Drill, Q&A ch1.
11 Jan, Intro, GB Gustafson, nothing due. 12 Jan, Nothing due. 13 Jan, Submit Page 16, 1.2-2 for quick review. 14 Jan, Intro, Thu. assistants Ben Murphy and Charles Cox 15 Jan, Begin maple lab 1.	22 Jan, Page 16, 1.2: 2 <input type="text"/> , 4 <input type="text"/> , 6 <input type="text"/> , 10 <input type="text"/> 22 Jan, Page 26, 1.3: 8 <input type="text"/> , 14 <input type="text"/> 22 Jan, LCB115: Time TBA, Repeat maple intro.
<b>Week 2, Jan 19 to 22</b> Lecture 1.5, 2.1, 2.2.	<b>Week 3, Jan 25 to 29</b> Lecture 2.3, 2.4, 2.5, 2.6.
18 Jan, No class, Martin Luther King	25 Jan, Nothing due.

26 Jan, LCB115: Time TBA. Repeat maple intro.  
17 Jan, Nothing due.  
28 Jan, Cox and Murphy: Discuss maple L2.1.  
Exam 1 review. Drill, Q&A ch1.  
29 Jan, Page 41, 1.4: 6 , 12 ,  
18 , 22 , 26   
29 Jan, Page 54, 1.5: 8 , 18 ,  
20 , 34

#### Week 4, Feb 1 to 5

Lecture 3.1, 3.2, 3.3.

01 Feb, Nothing due.  
02 Feb, Nothing due.  
03 Feb, Nothing due.  
04 Feb, Ben and Charles: Exam 1 review. Discuss  
maple L2.  
05 Feb, Page 86, 2.1: 8 , 16   
05 Feb, Page 96, 2.2: 10 , 14   
05 Feb, Page 106, 2.3: 10 , 20

#### Week 5, Feb 8 to 12

Lecture 3.4, 3.5, 3.6.

08 Feb, Submit Exam Review problems ER-1 ,  
ER-2   
09 Feb, Submit Maple lab 1:  
L1.1 , L1.2 , L1.3 , L1.4   
10 Feb, Submit maple L2.1 copy for quick review.  
11 Feb, Ben and Charles: Exam 1 review. Discuss  
maple Lab 2.  
12 Feb, Page 152, 3.1: 6 , 16 ,  
26   
12 Feb, Page 162, 3.2: 10 , 14 ,  
24   
12 Feb, Page 170, 3.3: 10 , 20

#### Week 6, Feb 15 to 19

Lecture 4.1, 4.2, 4.3, 4.4.

15 Feb, No class, President's Day  
16 Feb, Nothing due.  
17 Feb, Nothing due  
18 Feb, Midterm 1, Five problems ch1 and ch2  
19 Feb, Page 182, 3.4: 20 , 30 ,  
34 , 40   
19 Feb, Page 194, 3.5: 16 , 26 ,  
44

#### Week 7, Feb 22 to 26

Lecture 4.4, 4.5, 4.6, 4.7.

22 Feb, Nothing due.  
23 Feb, Nothing due.  
24 Feb, Page 212, 3.6: 6 , 20 ,  
32 , 40 , 60

25 Feb, Ben and Charles: Exam 2 Review. Drill,  
Q&A Ch3.

25 Feb, Ben and Charles: Discuss maple L3.

26 Feb, Page 233, 4.1: 16 , 20 ,  
32

26 Feb, Page 240, 4.2: 4 , 18 ,  
28

#### Week 8, Mar 2 to 6

Lecture 5.1, 5.2, 5.3, 5.4.

02 Mar, Nothing due.  
03 Mar, Nothing due.  
04 Mar, Submit maple lab 2:  
L2.1 , L2.2 , L2.3 , L2.4   
05 Mar, Ben and Charles: Exam 2 review.  
05 Mar, Ben and Charles: Discuss maple L4.  
06 Mar, Page 248, 4.3: 18 , 24   
06 Mar, Page 255, 4.4: 6 , 24

#### Week 9, Mar 8 to 12

Lecture 10.1, 10.2, 10.3, 10.4

08 Mar, Nothing due.  
09 Mar, Nothing due.  
10 Mar, Page 263, 4.5:  
6 , 24 , 28   
10 Mar, Page 271, 4.6: 2   
10 Mar, Page 278, 4.7: 10 , 20 ,  
26   
11 Mar, Ben and Charles: Exam 2 review. Discuss  
maple L4.  
12 Mar, Page 294, 5.1:  
34 , 36 , 38 , 40 ,  
42 , 46 , 48   
10 Mar, Page 306, 5.2: 18 , 22   
10 Mar, Page 319, 5.3: 8 , 10 ,  
16 , 32

#### Week 10, Mar 15 to 19

Lecture 10.5, EPbvp7.6, 5.5

15 Mar, Nothing due.  
16 Mar, Page 331, 5.4: 20 , 34   
17 Mar, Nothing due.  
18 Mar, Midterm 2, Five problems ch3, ch4,  
ch5.1-5.3  
19 Mar, Nothing due.

#### Spring Break: Mar 20-27

Happy Holiday!

20-27 Mar, Traveling? Nothing due from Mar  
17-29. Substantial amounts of dailies, including  
maple projects, are due after the break.

#### Week 11, Mar 29,30,31 and Apr 1,2

Lecture 5.6, EPbvp3.7, 6.1, 6.2

29 Mar, Nothing due.

30 Mar, Submit maple lab3:

L3.1 , L3.2 , L3.3

30 Mar, Submit maple L4 :

L4.1 , L4.2 , L4.3

31 Mar, Nothing due.

01 Apr, Ben and Charles: Exam 3 review. Discuss maple lab5.

02 Apr, Page 576, 10.1: 18 , 28

02 Apr, Page 588, 10.2: 10 , 16 ,

24

02 Apr, Page 597, 10.3: 6 , 18

02 Apr, Page 606, 10.4: 22

### Week 12, Apr 5 to 9

Lecture 7.1, 7.2, 7.3, 7.4.

06 Apr, Page 616, 10.5: 4 , 22 , 28

06 Apr, Page 510 in EPbvp 7.6: 8 , 22

07 Apr, Nothing due.

08 Apr, Page 346, 5.5: 54 , 58 ,

6 , 12 , 22

08 Apr, Ben and Charles: Exam 3 review. Discuss maple lab6

09 Apr, Page 357, 5.6: 4 , 8 ,

18

09 Apr, Page 227 in EPbvp 3.7: 4 , 12

### Week 13, Apr 12 to 16

Lecture 7.4, 7.5 /w Laplace, 8.1, 8.2.

12 Apr, Nothing due.

13 Apr, Submit maple lab5:

L5.1 , L5.2 , L5.3

14 Apr, Submit maple lab6:

L6.1 , L6.2 , L6.3

15 Apr, Ben and Charles: Exam 3 review.

16 Apr, Page 370, 6.1: 12 , 20 ,

32 , 36

16 Apr, Page 379, 6.2: 6 , 18 , 28

### Week 14, Apr 19 to 23

Lecture 9.1, 9.2, 9.3.

19 Apr, Submit maple lab7:

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

20 Apr, Nothing due.

22 Apr, Nothing due.

22 Apr, Midterm 3, Five problems ch5, ch10, ch6

23 Apr, Page 400, 7.1: 8 , 20

23 Apr, Page 413, 7.2: 12 , 14

23 Apr, Page 425, 7.3: 8 , 20 ,

30

23 Apr, Page 438, 7.4: 6 , 24

### Week 15, Apr 26,27,28

Lecture 9.4, Final Review.

26 Apr, Nothing due.

27 Apr, 8.1: 4 , 12 , 38

27 Apr, 8.2: 4 , 19

28 Apr, 9.1: 4 , 8 , 18

28 Apr, 9.2: 2 , 12 , 22

28 Apr, 9.3: 8 , 9 , 10

28 Apr, Office hours and lectures finished.

30 Apr, Semester Extra Credit 9.4: 4 , 8

30 Apr, Semester Extra credit Ch9, Ch10X and maple 8,9,10 due.

Deliver under the door 113jwb by 6pm.

01 May, Saturday: Special Final Exam review, 2pm, LCB 219

May 3 and 5, Final Exam.

See the online final exam study guide.

### Exam Period, May 3 and 5

Final exam for the 7:30am class is Wed, May 5, 2010 from 7:30am to 10am [JTB 140] .

Final exam for the 12:55pm class is Mon May 3, 2010, 12:30pm to 3:00pm [JWB 335].

**Extra Credit:** Under the door, 113jwb.

30 Apr, Ch9 Extra Credit. About 10 problems appear on the ch9 extra credit page.

30 Apr, Ch10X Extra Credit. About 10 challenging Laplace problems appear on the ch10X extra credit page.

30 Apr, Maple Optional Lab 8:

Earthquake L8.1 , L8.2 , L8.3 , L8.4 , L8.5

30 Apr, Maple Optional Lab 9:

Tacoma Narrows L9.1 , L9.2

30 Apr, Maple Optional Lab 10:

Brine and Glucose L10.1 , L10.2 , L10.3 , L10.4

Extra credit records locked at 6pm on 30 Apr.

Ch9, Ch10X and maple 8,9,10 credits apply to the semester dailies total, not just ch9.