Kosuke Ishikawa

MATH 757, Partial Differential Equations for Engineers

PROFESSOR: Ken Miller
OFFICE: 343 Jabara Science Building
OFFICE HOURS: 10:30-11:00 W, Th
1:30-2:00 M, F
MATH LAB: 1:00-2:00 T

TEXT: Haberman, Elementary Applied PDE, 3rd ed.

SYLLABUS: Sections covered before Sep 19, more or less in the following order:
Chap 1, 4.1, 12.3-12.5, 3.1-3.3, 2.1-2.4
To be covered before Oct 3: 2.5, 3.4-3.6, 4.4
After that: Chap 5, 7, 8 and 10.

GRADES: (probable scheme) two 75 minute tests: 100 pts each,
final: 150 pts
Homework: 50 pts
Total points possible: 400

Test dates: Oct 10, Nov 26 FINAL: Dec 17 (7:40-9:30)

HOMEWORK PROBLEMS

Problems to be turned in Oct 3
~~1.3.1,~~ 1.4.3, 1.5.3, ~~1.5.11, 2.3.2e,~~ ~~2.4.1b, 2~~.4.2, 2.5.1d, 2.5.2, 2.5.5b, ~~2.5.10,~~ ~~3.3.2a, 3.4.6,~~ 12.5.1b,c, 12.5.3a,b ~~Problems 1-3 below~~.

Find the Fourier series for the following:

1. $f(x) = 2x^2 - 1, \quad 0 < x < 2L, f(x + 2L) = f(x)$

2. $f(x) = 2x^2 - 1, \quad -L < x < L, f(x + 2L) = f(x)$

3. $f(x) = \cos^2 2x$

More suggested problems to do, but which won't be collected:
1.3.2, 1.5.1, 2.3.1b,c, 2.3.2a, 2.5.1a, 2.5.21, 2.5.22, 3.2.2f,g, 3.3.5c, 3.4.5, 12.3.4, 12.3.5, 12.3.6a

MATH 757, Partial Differential Equations for Engineers

PROFESSOR: Ken Miller
OFFICE: 343 Jabara Science Building
OFFICE HOURS: 10:30-11:00 W, Th
1:30-2:00 M, F
MATH LAB: 1:00-2:00 T

TEXT: Haberman, Elementary Applied PDE, Prentice Hall, 3rd ed.

SYLLABUS: Oct 17, 29: 5.1-5.4, 5.6
Oct 29-Nov 14: 7.1-7.9
Nov 19-Dec 3: Chap 8 (8.2 and 8.3 at least)
Dec 5-10: 10.2-10.4

GRADES: (probable scheme) two 75 minute tests: 100 pts each,
final: 150 pts
Homework: 50 pts
Total points possible: 400

Test dates: Oct 24, Nov 26 FINAL: Dec 17 (7:40-9:30)

HOMEWORK PROBLEMS
(Each of the following problem sets worth 10 points)

energy of vibration

Set 2: Due Nov 7: 4.4.3, 4.4.9, 5.3.2, 5.3.8, 7.3.1c, 7.3.7d

Set 3: Due Nov 19: 7.7.2b, 7.7.7, 7.8.1, 7.8.2d, 7.9.1c, 7.9.4a
(a,b)

Set 4: Due Dec 10: 8.2.2c, 8.3.1f, 8.3.6, 10.3.7, 10.3.8, 10.4.3, 10.4.4

Additional problems to do, but not turn in: (These might show up on a test)
4.4.10a, 4.4.11, 5.3.4, 7.2.1,7.3.4b, 7.4.2, 7.5.1, 7.5.4, 7.5.7, 7.7.1, 7.8.5a,b,d, 7.9.1b
8.3.1c, 8.3.5, 10.3.5, 10.3.6, 10.4.5