Math/Phys 611    Math Physics    Fall 2016

CRN: 74549/74990, 3 credits

MWF 10:30 – 11:30 AM in GRUE 204

Prerequisites:    MATH 302 (ODEs), 314 (Linear Algebra), 421 (Applied
Analysis) and 422 (Complex Analysis) or permission of instructor.

Web:  www.dms.uaf.edu/~rybkin/

Office Hours:    MWF 1:00-2:00 in Chapman 304B and by appointment.

Text:    Lecture notes and Mathematical Physics, by E. Butkov, Chapters 1 – 15.

Course Description:

It is the first part of a two semester course continuing as Math/Phys 612 in the
spring of 2017. In 611/612 we shall cover: functions of a complex variable, finite
dimensional linear spaces, infinite dimensional spaces, generalized functions, linear
ordinary differential equations of second order, special functions, Fourier series, Fourier
transform, partial differential equations, Green’s functions. Some other topics will be
considered if time permits.

Homework:

Each week’s assignment will be announced in class and will be typically (unless
otherwise announced) due on Wed by 5:00 pm (specifics will be discussed later). No late
homework will be accepted but I will pardon you from skipping one homework
assignment.

You are welcome to collaborate on homework but final write-ups set up in LaTeX must
be individual. If you receive significant help solving a problem, please make a note in
your homework to give the person who helped you a credit. If you looked up a solution
on line or elsewhere, please cite that source. There will be no penalties for being honest.

Homework Solutions

Each week, each of you will be responsible for presenting two high quality solutions for
our solution key. Problems will be assigned at random. Submit your solutions to me by
at 5:00 pm on Monday, i.e. two days before the assignment is due. I’ll review your work
and ask for changes and/or a meeting if needed. All solutions must be finalized no later
than Friday. Participation in this exercise is included in your homework grade and is
equivalent to another homework assignment.
**Self-Grading**
Each week, each of you will grade someone else’s homework in a random fashion. Participation in this exercise will also be included in your homework grade as two homework assignments. Your grade for it will be based on the quality of your grading. The due date is the following Monday by 11:30 (i.e. it will be collected in class).

**Midterm:**
There will one take-home midterm. Specifics will be announced closer to that time.

**Final Exam:**
Will be a take-home final exam to be handed out in the last week of class. Specifics will be announced closer to the end of the semester.

**Presentation:**
Is optional for extra 5%. Please see me if you choose this option.

**Grades:** Are determined from:

<table>
<thead>
<tr>
<th>Homework</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm</td>
<td>25%</td>
</tr>
<tr>
<td>Final</td>
<td>35%</td>
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</tbody>
</table>

Course grades are determined as follows (in interval notation):

| A+       | (97,100] |
| A        | (93, 97]  |
| A-       | [90, 93]  |
| B+       | (87, 90]  |
| B        | (83, 87]  |
| B-       | [80, 83]  |
| C+       | (77, 80]  |
| C        | (73, 77]  |
| C-       | [70, 73]  |
| D+       | (67, 70]  |
| D        | (63, 67]  |
| D-       | [60, 63]  |
| F        | [0, 60]   |

Borderline cases will be graded up or down based upon your overall performance.

**Withdrawals:** I reserve the right to withdraw you if your average is 55% or less by the deadline for withdrawal.

**University and Department Policies:** Your work in this course is governed by the UAF Honor Code. Visit [www.uaf.edu/dms/policies/](http://www.uaf.edu/dms/policies/) for the Department of Math and Statistics specific policies on incompletes, late withdrawals, and early final exams.

**Disabilities Services:** The Office of Disability Services implements the Americans with Disabilities Act (ADA). Please contact the Office of Disabilities Services (203 WHIT, 474-7043) to set up any necessary accommodations.