Math 4564 CRN 85363 (Operational Methods)
Fall 2016 Syllabus

• Lecturer: Stephen McIntyre

• Office: McBryde Hall 531

• E-mail: smcintyr@vt.edu (All emails must contain MATH 4564 in the subject line if a reply is expected)

• Office Hours: 12:00pm-1:00pm, TTh, W 1pm-2pm and by appointment. These times might change depending on how well they work for the class.

• Class meetings: WLH 340


• Course content: This course covers the topics of Laplace transforms, Fourier series, partial differential equations and separation of variables, and boundary value problems.

• Software: Mathematica will be used throughout this course to help convey the material. In addition, Mathematica will be needed to complete homework assignments and possibly exam problems. Do not be concerned if you are not familiar with Mathematica. I will provide all necessary information needed to use Mathematica. Since you are able to use Mathematica, I may ask you to explicitly show your steps for homework questions and exam questions. By this I mean that you should not use the Mathematica commands to solve the problem but rather work the problem out by hand. It will be clear in the problem statement for when this is needed to be done.

The course will rely on Canvas to distribute course material, assignments, notes, videos, Mathematica Notebooks, etc.

• Prerequisites: Math 2214. (Math 4564 duplicates Math 4544.)

• Grading policy:

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW</td>
<td>25%</td>
</tr>
<tr>
<td>Exams</td>
<td>25% \times 2 = 50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

• The course grade will be assigned as follows: ≥90 guarantees at least A-, ≥80 guarantees at least a B-, ≥70 guarantees at least a C-, ≥ 60 guarantees at least a D-.

• Missing exams: Make-up exams will not generally be given. If a student has, in my judgment, a valid excuse (e.g. documented illness), the final exam will assume the added weight of the missed exam. If the excuse is unacceptable (e.g. forgetfulness), the student is technically entitled to no credit.

• Homework Policy: Homework assignments will be posted with due date on Canvas. Please check Canvas regularly for assignments. All graphs generated in Mathematics are required to have axis labels, legend if needed, and be clearly readable.

• Late Homework: Homework that is handed in late is subject to a penalty of two (2) points off if it is handed within 12 hours after the start of class on the due date. To avoid a penalty or zero grade for a late homework you must show convincing evidence/documentation that you had no alternative (since homework problems are known well in advance). If you have a valid reason, I may allow you to hand in homework late without any penalty or I may not count the particular homework. If you are
hanging in multiple pages, please staple the pages together. Homework submitted without a staple will be subjected to a penalty of two (2) points.

- **Allowed help on homework:** You may use the answers in the back of the book to verify your answers. You may also use the tables at the front and back of the book, provided that you make a proper reference to the material used. Students may consult books and notes for homework, and students may get help with homework assignments from other students, your 4564 instructor, and from Tutoring Services.

- **Unallowed help on homework:** Copying a solution from a solution manual or any other source is prohibited. Using another person’s solutions to the homework when writing up an assignment is prohibited. In writing up an assignment to be handed in, every student needs to work alone (without other students or other students’ papers). By handing in the homework, a student certifies that what is written accurately represents the student’s own understanding of the material expressed in the student’s own words. If Mathematica is used for a problem, the input/output used must be supplied in your work.

- **Honor System:** The Virginia Tech Honor System applies to all graded work in this course. Students are responsible for understanding and adhering to the Honor Code. The inclusion in an assignment of work (from any source) done by someone whose name does not appear on the assignment or the inclusion of the reproduction (by any means) of such work is a violation of the Honor Code unless this inclusion is used in a way explicitly authorized by the instructor.