Physics 4820: Mathematical Physics II.
Winter 2017.
Monday, Wednesday and Friday. Slot 07. 2:00 – 2:50. Room C-3067.

PR: Physics 3820 or all of Mathematics 2051, 2260, 3202, 3210

Course description on department web page:
http://www.mun.ca/physics/undergraduates/syllabus/p4820.php

Instructor.
Prof. Jolanta B. Lagowski. Rm C3031. Phone: 864-2667. Email: jolantal@mun.ca.

Office Hours: Contact instructor by email to request office time.

Texts.
*Mathematical Methods for Physicists*, any other edition by Arfken et al. (Elsevier Press) or other similar textbooks.

Evaluation.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Mid-term tests</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
</tr>
</tbody>
</table>

No supplementary exam.

Assignments (4).
- Due approximately every two weeks or so, starting near the end of January.
- To be turned in during class on the due date.

Mid-term tests (2).
- 50 min. per test. Approximately mid-February and mid-March. Most likely on Feb. 10th and Mar. 17th.

Missed work.
- Students who cannot complete assignments or mid-term tests need to consult the University Calendar, Section 6.7.5 Exemptions from Parts of the Evaluation, and speak to the instructor.

Tentative Outline.
I. Sturm-Liouville Theory
II. Bessel Functions
III. Legendre Functions
IV. Group Theory
V. Integral Transforms: Laplace and Fourier
VI. Delta Functions, Theory of Distributions and Green’s Functions
Some additional notes.

1. Assignment #1 will be due at the end of January/beginning of February, assignment #2 due at the end of February, assignment #3 due in the middle of March and assignment #4 will be due last day of classes.
2. In the case of missing either of the mid-term tests due to illness or bereavement (see also section **Missed work** above), the corresponding 15% will be added to the final exam (which will be worth 55% in that case).

Use of Recording Devices in Classrooms.

The lectures and displays (and all material) delivered or provided in this course, including any visual or audio recording thereof, are subject to copyright owned by Dr. J.B. Lagowski. It is prohibited to record or copy by any means, in any format, openly or surreptitiously, in whole or in part, in the absence of express written permission from Dr. J.B. Lagowski any of the lectures or materials provided or published in any form during or from the course.

Important general information from the University.

It is the student’s responsibility to acquaint themselves with these items. Please read.

   [http://www.mun.ca/student/conduct/](http://www.mun.ca/student/conduct/)

6.8.2 Exemptions From Final Examinations
   [http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628](http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628)

6.12 Academic Misconduct
   [http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748](http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748)

Accommodations for Students with Disabilities
   [http://www.mun.ca/blundon/accommodations/](http://www.mun.ca/blundon/accommodations/)