VECTOR CALCULUS SYLLABUS
MATH 4258/6258 (PHYS 4510/6510)
SPRING 2015

CRN 12421/12423 (12440/12441) TR 9:30am – 10:45am, Sparks Hall 311

Instructor: Alexandra Smirnova
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Office hours: TR 11:00am – 12:00pm or by appointment

Description: Vector differential calculus, gradient of a scalar field, directional derivative, divergence and curl of a vector field, line and surface integrals, Green’s theorem, Divergence theorem of Gauss, Stokes’s theorem, basic engineering applications in solid mechanics, fluid flow and heat problems, complex integration (partly).


Prerequisite: Grade of C or higher in Math 2215.

Administrative Drop Policy: Students who did not take the required prerequisite or do not attend the class regularly during the first two weeks will be administratively dropped.

Withdrawal: Tuesday, March 3, is the last day to withdraw and receive a possible grade of W except for hardship withdrawal.

Procedures: Class meets twice a week. Taking good notes during the class is of paramount importance. Homework will be assigned in
each class. After the class read the book, read your notes and do as many of the homework problems as you can prior to the next class. Try to get the remaining problems explained in the beginning of the next class or during the next office hours. You are responsible for all material covered in class, whether or not you attended this class.

Team Competitions: There will be 7 team competitions during the semester. The purpose of these competitions is to take attendance and to keep you up-to-date in the course. Make-up competitions will not be given.

Examinations: There will be 3 hourly exams and the final exam (two and a half hours). All hourly exams will be taken during the regular class time and in the regular classroom. Books and notes will not be allowed on all tests. Missed exams will receive a grade of 0. Any conflicts must be worked out ahead of time. There will be no make-up exams after the test day except in an extreme verifiable emergency. The tests and the final for graduate students (Math 6258/Phys 6510) will contain additional problems.

Exam dates: February 12, March 12 and April 16.
Final Exam: Thursday, April 30, 8:00am – 10:30am.

Grading: There will be a total of 200 points possible for this course. The points are distributed as follows

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Three midterm exams</td>
<td>105</td>
<td>52.5%</td>
</tr>
<tr>
<td>Final exam</td>
<td>60</td>
<td>30%</td>
</tr>
<tr>
<td>Team competitions</td>
<td>35</td>
<td>17.5%</td>
</tr>
</tbody>
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Your total accumulated points will determine your final letter grade

- A+ 197-200
- A  181-196
- B+ 177-180
- B  161-176
- C+ 157-160
- C  141-156
- D  121-140
- F  0-120

Academic Dishonesty: Plagiarism and cheating are serious offenses and may be punished by failure on the exam. Repeated cheating will result in a grade F for the course. See the University's policy on Academic Honesty: (www.gsu.edu/~wwdos/codeofconduct_conpol.html).
**Conduct Policy:** Turn off all pagers and cell phones before entering the classroom – having these items “go off” in class is considered disruptive behavior and can result in your being administratively dropped from the course. In fact, *any type of inappropriate conduct may result in your being administratively dropped from the course.* See the University’s Policy on Disruptive Behavior in the General Catalog, p. 19 (www.gsu.edu/images/Downloadables/UG_05_06.pdf) or On Campus, the official student handbook (www2.gsu.edu/~wwdos/codeofconduct_adminpol_a.html).

**Inclement Weather Policy:** If the University is closed due to inclement weather, any exam that may have been scheduled for that date will be administered on the next available class date. If an assignment is due that day (or if you are scheduled for an exam), it will be due the next class.

**Studying:** You *must* work on this course every week. The pace is hectic and allowing yourself to fall behind will end in disaster.

**This course syllabus provides a general plan for the course; deviations may be necessary.**