ADVANCED CALCULUS II  
MATH 472G-001  
SPRING 2013

Classroom: FB 213  
Meeting Times: MWF 9:00am – 9:50am  
Instructor: Dr. Katharine Ott  
Office Phone: (859) 257-6815  
Office Location: POT 733  
Office Hours: MW 11:00 am – 12:00 noon, F 1:00 pm - 2:00 pm, and by appointment  
Course webpage: http://www.ms.uky.edu/~kott/index/MA472_S13.html

Course Description:  This course covers a rigorous study of functions of several variables. The main topics of the course are 1) Linear Maps 2) Derivatives 3) Double Integrals 4) Green’s Theorem 5) Surface Integrals 6) Divergence and 7) Stokes’ Theorem. Additional topics will be covered if time permits. This course will emphasize the art of writing mathematical proofs.


Office Hours: I hold office hours for your benefit and I encourage you to take advantage of them. You do not need an appointment if you plan to attend regularly scheduled office hours. If you cannot make my posted hours I will be happy to set a meeting time that is convenient for the both of us.

Course Web Page: The course web page will be updated regularly with class announcements and homework assignments. You will also find a copy of the class syllabus and my contact information on the page, as well as a Google Calendar for the class. This calendar includes homework due dates, exam dates, office hours, and extra-curricular math events.

Grading: Final grades for undergraduates will be assigned according the following scale:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework and Participation</td>
<td>40%</td>
</tr>
<tr>
<td>Mid-term Exam I</td>
<td>15%</td>
</tr>
<tr>
<td>Mid-term Exam II</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
</tbody>
</table>

A 90 – 100 %  
B 80 – 89 %  
C 70 – 79 %  
D 60 – 69 %  
E Below 60 %

Graduate students’ grades will be calculated according to the same weights as above. Graduate students cannot receive a final grade of ‘D’.
**Homework:** There will be weekly homework assignments. Doing homework regularly is the best preparation for exams and it is absolutely essential for understanding the material. I expect all proofs to be written in full sentences with correct grammar. Each proof or problem will be graded on the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Correct mathematical proof and well written</td>
</tr>
<tr>
<td>2</td>
<td>Contains the right idea, but has some errors</td>
</tr>
<tr>
<td>1</td>
<td>Significant mathematical errors</td>
</tr>
<tr>
<td>0</td>
<td>No attempt</td>
</tr>
</tbody>
</table>

No late homework will be accepted except in exceptional circumstances. You may work with your peers to prepare problems but you must write up solutions individually. Graduate students may be assigned additional or alternate problems on some assignments. *You may not consult the Internet for help with your homework. Copying homework solutions from any webpage will be considered cheating.*

**Participation:** You are expected to participate in class discussions, group discussions, and to present solutions on the board on occasion. The category of participation also includes attendance. It is essential that you be present at all class meetings. You will be allowed 3 absences with no penalty. After this point, I reserve the right to drop your Homework and Participation grade by 5 points for each additional absence. In exceptional cases such as extended illness, we can discuss alternative procedures. I will begin taking attendance Wednesday, January 16.

**Exams:** Two mid-term exams and a final exam are scheduled for this course. The mid-term exams will be given in class on Friday, February 8 and Friday, March 22. The mid-term exams may contain a take-home portion, this will be announced a week in advance. The final exam is scheduled for Wednesday, May 1, 8:00 am – 10:00 am. The final exam will be comprehensive. The final exam cannot be rescheduled unless you meet the University requirements. Absolutely no collaboration on exams is allowed.

**Class Conduct and Special Accommodations:**

- Please be respectful of your classmates and me while in class or office hours. This includes turning off your cell phones and putting away your laptops.
- Cheating on homework or exams will not be tolerated. You are expected to follow the academic integrity standards stated in the University Senate Rules (see Chapter 6, [http://www.uky.edu/USC/New/SenateRules.htm](http://www.uky.edu/USC/New/SenateRules.htm)).
- If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a **Letter of Accommodation** from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.