MATH 264 SECTION 2
SPRING 2014

COURSE INFORMATION

• INSTRUCTOR : Przemo Kranz, Hume 333. tel. 915 7819, mmkranz@olemiss.edu

• TEXT: Briggs, Cochran, Calculus, Early Transcendentals, Custom Edition for The University of Mississippi, Pearson

• CLASS MEETS : M–W–F 1:00 – 1:50 pm in Hume 201

• OFFICE HOURS : T–Th 8:00 - 11:00 am and by appointment.

• GRADING : There will be three tests, each worth 100 pts. and a Final Examination, worth 200 pts. In addition there will be up to 15 quizzes of 10 pts. each. Only 10 best quiz scores will be used to determine the grade. The Homework will be done online and will contribute 50 pts. to the overall score. 94% of the total score will yield an **A** grade, 90–93 % an $\mathbf{A}^-$ grade, 87–89% a $\mathbf{B}^+$ grade, *etc.*

• **VERY IMPORTANT**

1. If a test is missed for ANY reason, a grade of 0 will be given. There will be absolutely NO make up tests given for ANY reason.
2. The lowest test grade will be replaced by the final exam percentage (it this is higher). Do not miss (for any reason) more than one major test. There will be no means to make up a test. Note that the quiz/HW grade cannot be replaced.
3. Any person who must miss a scheduled exam because of an official University function must reschedule and take this exam BEFORE the exam is scheduled to be given. NO OTHER rescheduling will be allowed.
4. An "I" grade will not be given without the permission of the Department of Mathematics.
5. Students must show all work for each test question and arrive at a correct answer.
6. If a student wishes to discuss the grading policy, the testing policy, or wishes to have any conversation regarding the instructor of the course, please see the instructor in the appointed OFFICE HOURS or make the appointment with the Department's Chairman, Dr. Iwo Labuda in Hume 305.
7. Every student must take the final examination at the time scheduled.

• SPECIAL NOTE : All cellular phones, pagers, and other electronic equipment should be turned off during the class period.

• ATTENDANCE : Students are expected to attend each section of the course. Attendance will be checked at each session. Each unexcused absence will result in 5 points deducted from the total.

• SYLLABUS

I. Functions of Several Variables.

Chapter 12 – 9 sections

II. Multiple Integrals.

Chapter 13 – 7 sections

III. Vector Calculus.

Chapter 14 – 8 sections

• Important Information : In order to succeed in this course, students are required to attend the classes **regularly** and be in class **on time**.

• Course Objective : The course is a culmination of the sequence of Calculus and addresses the main topics of the Calculus : the Derivative and the Integral, in the case of functions of several variables. This allows for a more realistic modelling of applications in the real (technological) world. The students who complete the course successfully should be able to undertake the main courses of their chosem major with the full command of the required mathematical tools. Additionally, Mathematics majors should be adequately prepared to continue their eduction in a higher level courses where the concepts of Calculus are examined in abstract form with full precision.

• The Calculus Sequence : The course is a culmination of the Calculus sequence (MATH 261 - 264) and it expands the concepts of the Calculus, the Derivative and the Integral to the case of functions of several variables. This allows for a more realistic applications of the tools of Calculus in a real world. This is largely inspired by the needs of the modeling of technological phenomena as e.g in the engineering or economic sphere. Therefore the emphasis is on providing these tools that illustrate the potential applications and explaining the meaning of the mathematical concepts. At the end of the course the students should be adequately prepared to address the problems of their chosen major. The students majoring in Mathematics should be adequately prepared to continue the study of the concepts and models of Calculus on a higher plateau in a more precise, abstract setting. The study of Calculus serves also as a presentation of a logically consistent and efficient model of thinking. Therefore it is a very useful vehicle in learning to express critical thinking. Students are expected to be more precise and efficient in their thinking and be more effective in assessing the validity of various arguments.

The students majoring in the areas of Engineering are expected to acquire all the necessary mathematical tools to allow them to continue the study of their chosen

major with full confidence. The students majoring in Physics will have an adequate collection of mathematical tools as well as a sharpened sense of their usefulness to address the advanced problems of Physics and Mathematical Physics. The students whose chosen major is Mathematics will be prepared to continue their mathematical studies with the appropriate background allowing them to address the problems first outlined in the Calculus sequence on the much higher and mathematically more rigorous level. The course itself is a culmination of the complete 4 course sequence of Calculus and in this particular course the emphasis is on the transition from the concepts of one variable to the more realistic and useful situations requiring several variables. The specific concepts addressed in the course are : Derivatives of Functions of Several Variables, Multiple Integrals, and Integration in Vector Fields with Applications

Honors students enrolled in the course will be expected to complete several additional assignments illustrating some concepts developed in the course and will prepare a written report on these topics.

• Online Homework : Enroll in the MyMathLab , I have already opened the course. Your code is " kranz43523 "