Math 251A Course Information - Fall 2009

INSTRUCTOR: Professor Karl Heinz Dovermann

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TEXT & MATERIAL: University Calculus (Alternate Edition), current edition, *Haas, Weir, Thomas*, Pearson/Addison Wesley.
After a short introduction of vectors (lecture notes are on the department website) we will cover Sections 2.1 through 6.2 from the text book: limits, differentiation, the Mean Value Theorem, applications to the discussion of curves and optimization problems, integration, the Fundamental Theorem of Calculus, substitution, and applications of intergration. For a more detailed time line see the master syllabus on the department website.

COURSE OBJECTIVES: Upon successful completion of Math 251A, the student will have a understanding of the above listed topics, be able to solve related routine as well as challenging problems, and be able to apply the ideas. Students are expected to learn some of the mathematical foundations of calculus, beyond the ability to use it as a computational tool.

PROGRAM OBJECTIVES: In this introductory level course students learn the basics about differentiation and integration of functions in one variable. The course material is fundamental for majors in mathematics, the physical sciences, and engineering.

DERIVE VIDEOS: We recorded some getting started videos for the computer program *Derive for Windows*. You can view or download these videos by going to http://www.math.hawaii.edu. Then click on *Online Materials*. You can also borrow a CD and copy the videos. You may also be able to get a complimentary copy of the program from your instructor.

OFFICE HOURS: Monday, Wednesday, Friday 9:30–10:15, Tuesday and Thursday 9:00–9:45. Other hours are available by appointment. Your TA is available for additional help.

EXAMS: There will be two midterms (the dates will be announced in class) and a final exam (see the university calender for the date and time). Make-up

exams will be given only under excruciating circumstances such as serious illness or family emergencies. Proof may be required. If you are a student athlete, or you need to travel for academic reason, then you must make arrangements in advance to take tests at an alternate time, possibly early.

HOMEWORK: I will assign homework every lecture. It is due during the next lecture.[1] Some problems will be graded. Homework should be cleanly written, and you may have to revise it before it is in an acceptable form. Your solutions should show the steps of your solution in a logical order and end with a proper formulation of the final answer.

GATEWAY EXAMS You have to pass the differentiation gateway exam to pass this course with a grade of C, or better. Details will be announced later.

GRADING: Your grade will be determined by the scores on the midterm exams (100 points each), homework and labs (125 points throughout the semester), and the final exam (175 points), provided that you passed the gateway exam. There may be a few opportunities to earn extra credit.

ABSENSES: It is expected that you attend every lecture and recitation session. If you are absent, then you are responsible for the material covered. Arrange to copy another student's notes and be informed of any announcements.

ACADEMIC EXPECTATIONS: Please read the statement about the academic expectations on the Mathematics Department webpage. Go to http://www.math.hawaii.edu, pick 'Undergraduate' and click on Academic Expectations.

CALCULATORS: Use of calculators will not be permitted on exams.

ACADEMIC HONESTY: No student shall claim or submit the work of another as one's own. No dishonesty will be tolerated.

IMPORANT DATES: It is your responsiblity to know about the important dates, such as deadlines to drop or withdraw from a course, holidays, final exam, etc.

[1] If you have to miss class, then you may hand in homework early. No late homework will be acepted.