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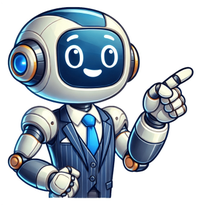

Math 216 umich

Math 216 Introduction to Differential Equations Course Outline: Your Grade, Assignments, Exams, Notes. The course is designed for engineers and scientists who will use differential equations in their work, providing a solid understanding of the subject. University of Michigan students looking for a more comprehensive treatment should consider Math 286 or 316 instead. Important details about the course include lecture meetings TWF, lab meetings on Thursday, two exams, five quizzes, written assignments, and weekly web homework. Final grades are determined by calculating a course average from midterm, final, quizzes, and lab performance. Assignments can be accessed through the menu on the left side-bar. Written assignments should be neatly completed and evaluated for both mathematical correctness and clarity of explanation. Be aware that not all problems will receive detailed grading due to time constraints. It is recommended to complete more than assigned problems, including practice exercises, to thoroughly learn the material. The written homework aims to provide a platform for understanding the concepts behind the course material. Web-based homework sets offer instant feedback on your work and can be accessed through the menu on the left. You are allowed six attempts per problem, with partial credit given for most questions with multiple parts. These sets follow a roughly weekly schedule and close at specific dates and times, as outlined in your syllabus. The purpose of web-based homework is to provide basic practice and initial conceptual problems to build understanding. Lab assignments have several components, including prelabs, lab reflections, and write-ups. Pre-lab assignments are required for labs 1-5, while labs 0, 2, and 4 do not require formal write-ups but instead ask for reflections on the differential equations being studied. Each lab manual contains a list of problems that must be completed as part of the write-up. The labs allow you to explore course material graphically and numerically, leading to better conceptual understanding. All written assignments, including homework, pre-lab assignments, and lab write-ups, are due to your recitation instructor on specified dates. Academic integrity is essential: copying text from old reports or other students' work, using online sites for solutions, or using posted solutions is considered cheating. This not only undermines your own learning but also devalues the degree and establishes a negative example for fellow students, instructors, and employers. Academic integrity is crucial, and any form of cheating may result in a penalty, including a failing grade, and will be reported to the administration. Collaborating with classmates on assignments, except for exams, is allowed and encouraged as it can aid in learning the material. However, all submitted work must be original; if it's a copy of someone else's work, it won't be considered your own. For students requiring academic accommodations due to disabilities, please notify your instructor as soon as possible. A Verified Individualized Services and Accommodations (VISA) form must be filed with the Department's online system at least two weeks before the accommodation is needed. The Services for Students with Disabilities (SSD) Office issues VISA forms. Exam dates are fixed: the midterm exam will be on Wednesday, 5/29, covering material from 1.1 to 4.7, and the final exam will be on Friday, 6/28, from 1:30 to 3:30 PM, covering all sections with a focus on 5.5 to 7.5. Travel plans are not a valid reason for taking an exam on a different date. Before the final, there will be an opportunity to demonstrate mastery of skills tested on the final; passing this assessment allows skipping corresponding questions on the final. During exams, calculators, cell phones, books, notes, and other aids are not permitted. Numerical calculations will be minimal. Lab sessions are held on Thursdays with a lab instructor for computational projects using Matlab. There are five lab projects throughout the semester, each with a downloadable lab manual containing prelab assignments due at the beginning of the lab session. Labs fall into categories: Lab 0 is introductory, requiring submission of a Matlab file without a reflection or report; Labs 1, 3, and 5 are MWrite assignments focusing on writing to learn core concepts, involving initial submissions, peer feedback, and revisions; and Labs 2 and 4 are reflection assignments. Math 216 Overview The course aims to introduce differential equations to students with prior knowledge of single-variable integral calculus. It consists of lectures and computer labs, with a faculty member teaching the lecture portion and graduate students conducting the lab sessions. The grading policy assigns weights as follows: Midterm Exams (20%), Final Exam (30%), Quizzes (20%), Web Homework (10%), Written Homework (10%), and Lab Writeups (10%). Your performance will be compared to other students in your lecture section for determining the course letter grade. Course Structure Historically, the course has included a combination of Midterm exams, quizzes, Final Web homework, and Lab writeups. The exact set of assessments and their weights are determined semester-by-semester by the course coordinator. Required Textbook Differential Equations: An Introduction to Modern Methods and Applications, 3rd edition (2015), Wiley. A custom edition with ISBN 9781119426271 is recommended but available only at certain bookstores affiliated with UM. Before submitting your work, carefully use calculator syntax and notation. This includes using parentheses around expressions like cos(2pi), e^(-ln(3)), or 1/(1+x) rather than cos 2pi, e^-ln3, or 1/1+x. Also, remember that sin(2x) should be used instead of sin2x. When taking square roots, use sqrt(x) or x^(1/2). Ensure your answers provide four or five significant figures to meet the system's requirements. Be mindful of notation differences: X is not the same as x, Sin is different from sin, and Pi is distinct from pi.