Project Interphase 2005 - Groups C & D.

Description. We will cover the same topics as in the regular 18.01 course. Normally, the students will be expected to pass Part I and/or II of the 18.01 A Advanced Placement Exam in the fall to get into 18.02. / 18.01A
This Sylabus is tentative and we will make small changes acording to the progress made in class.

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Grading Homeworks will be due each monday and there will be two in class exams and a final exam. The total grade will be based 30 % in the homeworks, 20 % in each in-class exam and 30 % in the final exam.

Text. Edwards and Penney - Calculus with Analytic Geometry (6th edition).

Syllabus

Part I - Review of Limits and Differentiation.
0. Wed 6/29 - Introduction.
1. Fri 6/01 - Limits, Continuity.
2. Mon 7/04 - Holliday.
3. Wed 7/06 - Basic differentiation rules, differentiable functions.
4. Fri 7/08 - Review of Implicit differentiation, related rates, min/max problems.
6. Mon 7/11 - Related rates problems, applications of implicit differentiation.
7. Wed 7/13 - Curve Sketching.
8. Fri 7/15 - Review Part I.

Part II - Integration.

9. Mon 7/18 - Exam 1. Introduction to part II
10 Wed 7/20 - Antiderivatives. Method of substitution.
11. Fri 7/22 - Basic properties and examples.
12. Mon 7/25 - Riemann sums, definite integrals, numerical methods
13. Wed 7/27 - Fundamental theorem of calculus. Applications: computation of areas between curves.
14. Fri 7/29 - Review fundamental theorem of calculus.
15. Mon 7/01 - Work and Arc-length.
Review work, arc-length, mean values.
16. Wed 8/03 - Applications: Surface areas.
17. Fri 8/05 - Polar coordinates. Parametric curves.
18. Mon 8/08 - Computations in polar coordinates
19. Wed 8/10 - Review. Exam.
20. Fri 8/12 - Further techniques: Partial fractions, integration by parts.
21. Mon 8/15 - Integration by parts. Review.
22. Wed 8/17 - Improper integrals.
23. Fri 8/19 - Infinite Series - examples, comparison test.