Math 1551 Section 4, Fall 2010

Tentative Schedule of Topics
Class: Monday - Friday 2:40pm-3:30pm, Tureaud 119

Text: *Calculus: Early Transcendentals* by Rogawski, publisher: Freeman (2008)

This is a TENTATIVE schedule and will be updated from time to time. The section numbers refer to the text *Calculus*, by Jon Rogawski.

Week 1: Aug 23-27

1. Real Numbers
2. Real Numbers
3. Limit: the Concept (2.1, 2.2, 2.8)
4. Algebra of Limits (2.3)
5. Continuity (2.4)

Week 2: Aug 30-Sep 1

6. Derivative: the Concept (3.1,3.2)
7. Derivatives and Continuity
8. Algebra of Derivatives (3.3)
9. Doing Derivatives
10. Derivatives of Trigonometric Functions (3.6)

Week 3: Sep 7-10

11. Derivatives of Trigonometric Functions
12. Derivatives of Trigonometric Functions
13. Chain Rule (3.7)
14. Chain Rule (3.7)

Week 4: Sep 13-17

15. Rolle's Theorem
16. The Mean Value Theorem
17. The Mean Value Theorem

18. Review
19. Test 1

Week 5: Sep 20-24

20. Related Rates (3.11)
21. Related Rates
22. Chain Rule (3.7)
23. Implicit Differentiation (3.8)
24. Implicit Differentiation (3.8)

Week 6: Sep 27-Oct 1

25. Derivatives of Exponential and Logarithm (3.10)
26. Derivatives of Inverse Functions (3.9)
27. Derivatives of Inverse Functions (3.9)
28. Higher order derivatives (3.5)
29. Higher order derivatives (3.5)

Week 7: Oct 4-Oct 8

30. Extreme Values (4.2)
31. Extreme Values (4.2)
32. Graph Geography
33. Graph Geography, Asymptotes
34. L'Hôpital's Rule (4.7)

Week 8: Oct 11-Oct 15

35. L'Hôpital's Rule (4.7)
36. Problems of Maxima and Minima (4.6)
37. More on Maxima and Minima (4.6)
38. Even more on Maxima and Minima
39. Newton's Method (4.8)

Week 9: Oct 18-Oct 20

40. Newton's Method
41. Review
42. Test 2

Fall Holiday

Week 10: Oct 25 -Oct 29

43. Integration (5.2)
44. The Riemann Integral (5.2)
45. Fundamental Theorem of Calculus (5.3)
46. Fundamental Theorem of Calculus (5.4)
47. Fundamental Theorem of Calculus (5.4)

Week 11: Nov 1-Nov 5

48. Integration Techniques (5.6)
49. Integration Techniques
50. Integration Techniques
51. Integrals of transcendental functions (5.7)
52. Integration Techniques

Week 12: Nov 8-Nov 12

53. Integration Techniques
54. Areas
55. Area between curves (6.1)
56. Areas
57. Areas

Week 13: Nov 15-Nov 19

58. Area between curves
59. Volumes (6.3)
60. Volumes
61. Volumes

62. Review

Week 14: Nov 22

63. Test 3

Week 15: Nov 30-Dec 3

65. Surface Area

66. Surface Area

67. Other aspects and uses of integration

68. Review

Final Examination: Monday, 6th December, 3pm-5pm.

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Lockett 324
Office Hours (Tureaud 119): Mon, Wednesday: 3:30pm-4:30pm, or by Appointment