WEBCALC: Calculus 1

***A Web Based, Interactive, Multimedia Calculus***
***by***
***The WebMath Group***

# MATH 151 at Texas A&M University – Fall 2001

Below is the syllabus for the semester.
Quizzes will be posted here after they are graded. (Dates of quizzes are already there.)
Other things may appear from time to time.

## Some useful HTML links

- To download free Scientific Notebook software:

  30-day trial copy, **or**

  Viewer only (no time limit)

- WebMath home page. (You can get the style file **webmath.cst** from here.)
- HTML home page for this course. (Please check this frequently for announcements.)

## Syllabus

Week Sections

**1**. 5 Vectors Omit 5.6 and 5.8 (and other 3-dimensional things).
(Review Secs. 1, 2, and especially 3 as needed.)
You might also want to read the first 2 or 3 pages ("Coordinates of a point") on Polar coordinates (from WebCalc2).

**2**. 6 Limits Omit 6.2 (ε and $\delta$).

**3**. 7 Continuity Postpone 7.5 (extreme value theorem).
8 Derivatives

**4**. 9 Derivative formulas
10 Derivative notations
14.2 Velocity
19 Trigonometric derivatives (Review Sec. 4 if needed.)

**5**. 12 The chain rule
- Exam 1: Thursday 9/27
  covers: 5,6,7,8,9,10,velocity

**6**. 13.1 Implicit differentiation
14 Higher derivatives
15 Vector-valued functions and tangent vectors to curves

**7**. 13.2 Related rates
13.3 Differentials and linear approximations
24 Newton's method (optional reading)

**8**. 16 Exponential functions
17 Inverse functions
18 Logarithmic functions

**9**. 20 Applications to economics
21 Radioactive decay
22 Applications to other sciences

- Exam 2: Thursday 10/25
  covers: 12,13,14,15,16,17,18,19

**10**. 25 Inverse trigonometric functions
26 L'Hospital's rule
7.5, 11 The extreme and mean value theorems

**11**. 27 Introduction to curve sketching
28 Concavity
29 Asymptotes
30 Optimization

**12**. 32 Antiderivatives
33 The definite integral

**13**. 34 The fundamental theorem of calculus

**14**. 35 Integration by substitution

- Exam 3: Tuesday 11/27
  covers: 11,20,21,22,25,26,27,28,29,30,32,33,34

**15**. Review; Makeup quiz

- Final Exam: Wednesday 12/12 1:00-3:00

WebCalc2

## Quizzes

**1**. Quiz 1: Vectors 8/30
**2**. Quiz 2: Parametrized curves, Limits 9/4
**3**. Quiz 3: Limits 9/6
**4**. Quiz 4: Asymptotes, Continuity 9/11
**5**. Quiz 5: Derivatives 9/13
**6**. Quiz 6: Derivative formulas 9/18
**7**. Quiz 7: Velocity, Trigonometric derivatives 9/20
**8**. Quiz 8: Chain rule (including trig derivatives) 9/25

- Exam 1: Thursday 9/27

**9**. Quiz 9: Implicit and Higher derivatives 10/2
**10**. Quiz 10: Vector-valued functions, Tangent vectors 10/**5**
**11**. Quiz 11: Related rates 10/9
**12**. Quiz 12: Differentials and approximations 10/11
**13**. Quiz 13: Exponential functions, Inverse functions 10/16
**14**. Quiz 14: Logarithms 10/18
**15**. Quiz 15: Applications of exponentials and logarithms 10/23

- Exam 2: Thursday 10/25

**16**. Quiz 16: Inverse trigonometric functions 10/30
**17**. Quiz 17: L'Hospital's rule 11/1
**18**. Quiz 18: Graphical analysis of functions 11/6
**19**. Quiz 19: Optimization 11/8
**20**. Quiz 20: Antiderivatives 11/13
**21**. Quiz 21: Summations, Definite integrals 11/15
**22**. Quiz 22: Fundamental theorem 11/20

- Exam 3: Tuesday 11/27

**23**. Quiz 23: Integration by substitution 11/29