

Tulane University—Lagniappe Summer 2006---Math 115-02 (Long Calculus)

Class Meetings: Mon., Tues., Weds., Thurs. 2:00pm-3:15pm—Boggs 104

Textbook: *Integrated Calculus* by Taalman

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Office: ****Loyola U.--Monroe Hall #537M...****
(near St. Charles and Calhoun, behind Music Bldg.)

Office Hours: Wednesdays, 3:35-4:30....also immediately after lectures in classroom is good for asking questions and clarifying issues

Course Overview: This course is meant to be an introduction to differential calculus, excluding trigonometric functions as well as exponential/logarithmic functions. ***We will spent a brief amount of time in week one reviewing some algebra topics, but for these you are responsible for already having mastery.*** By week 2, we should be well into the chapter 2 issues of calculus proper. Our course is intended to cover through chapter 7 of our text, culminating in the chain-rule, related rates, and general optimization problems. ******We will be omitting chapters 0.4, 0.5, and 2.3****** You are responsible for reading your text...I will be presenting material in my own style, and order. Moreover, some text issues i may not cover, but if they are assigned to you as problem styles, you are responsible for them. Also, I may occasionally present information not in the text at all, for which you are also responsible.

Grade Calculation: We will have three in class exams;

Exam 1---Thursday May 25—worth 22% of course grade

Exam 2---Wednesday June 14th—worth 34% of course grade

Exam 3---given on last day of class, cumulative---34% of grade

ALSO---10% of your grade will be based on brief, take home assignments that I will grade on a No-Partial-Credit Basis.

Week One--- sections 0.1, 0.2, 0.3 with other side adventures to be outlined in class.....partial suggested homework/topic list distributed in class....

0.1—focus on: integers, rationals, irrationals, reals (in part. How to show a repeating decimal is rational!!!); interval notation!!; algebraic defn. of absolute value and distance b/t real #'s ; Distance formula in plane (pythagoras!!!) ; midpoint formula in plane; who is descartes?? also—unions, and intersections, insofar as they relate to 'intervals' on the real line and solution sets of inequalities, etc..

ex: 3-10, 16, 17-26, 39-45, 46-55, 56-61, 66-71, 78-97

0.2—zero product property!!; quad formula and classic factoring/expansion formulas (also the general one for $a^n - b^n$)...adding/subt/mult/divide fractions.....good cancellation versus highly illegal cancellations!!...identities; inconsistent eqs.; (systems we will mostly ignore....)

ex: 11, 12, 16-22, 23-37, 38-40, 41-61, 62-76, 86

0.3---basic rules for inequalities.....learn how to solve inequalities with degree higher than one!!! also, inequalities with 'rational expressions..'...this is where we apply 'interval notation' to write solution sets.... also!! “ 'sandwich' vs. 'anti-sandwich' absolute value inequalities!!” (basically we will skip 'triangle inequality...)

ex: 8-18, 19-24, 45-68, 87. 90