MATH 2413: Calculus I

01/18/2011 – 05/13/2011

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Office Hours: 9am-12 pm T/TH, 8:30am-9 MW, 12-1 Friday
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Meet: P1
Text: Calculus, 9th Edition
by Larson Edwards

Calculus I: (4-0) 4 hours
Presents a study of rate of change of functions, limits, derivatives of algebraic and trigonometric functions, integration and applications. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite or co requisite: MATH 1348 or MATH 2412.

***Tentative Course Outline**

We will be covering chapters 1-5. We will also cover different methods of computing including the use of graphing calculators and Matlab.

Methods of assessment: The expected learning outcomes for the class will be assessed through exams, in-class activities, homework, class discussions, and/or active learning activities. Group work outside of class is encouraged.

Comprehensive Final Exam

Attendance: Attendance is not mandatory, but will be considered if final grade is border-line. (By border-line, I mean, for example, 89.4) Consideration will be taken only if you have 3 or less absences. I take up homework all at the same time, so it is in your best interest to be on time. If you are absent for any reason, you are responsible for all materials, notes, and being prepared to take a quiz or test the next time you come to class. It is a good idea to have a network of friends that can take notes for you and other things you might have missed while you were gone.

Homework: Homework will be assigned and taken up on the next class day. The homework will be the basis of discussion during class. NO LATE HOMEWORK WILL BE ACCEPTED!

Grading:		**Scale:**			
Homework:	15%	90 – 100%	A	Below 70%	F
Quizzes	20 %	80 – 89%	B		
Tests:	50%	70 – 79%	C		
Final:	15%				

Make-up: ***Absolutely no make-up tests will be given***. This is why it is so important to attend class. If you miss, it is your responsibility to turn in homework prior to class. **No late homework** will be accepted.

Civility in the classroom: Students are expected to assist in maintaining a classroom environment which is conducive to learning. In order to assure all students have an opportunity to gain from time spent in class, troublesome behavior will not be tolerated. This includes the use of cellular phones, making offensive remarks, reading newspapers, sleeping, bad attitudes, or engaging in any other form of

distraction. The instructor is authorized to take such steps as are necessary when the behavior of a student disrupts the normal classroom procedure.

Calculators: A graphing calculator is required. You will need a calculator that can do matrix manipulations such as row reductions and that can graph most functions. I would recommend a TI 83 or 84. Do not get a TI 86, TI 92, or any other that can do the factoring for you. Cell phones and similar devices may NOT be used as calculators. The instructor reserves the right to not allow any particular calculator. Check with the instructor immediately to make sure yours is allowed.

Tutorials: Tutors are available in the Math Center. I strongly encourage the use of this resource. The tutoring center is located in ET 110 and is available to everyone enrolled in this course free of charge.

Learning Resource Center (The Library)
The Library, known as the Learning Resources Center, provides research assistance via the LRC's catalog (print books, videos, e-books) and databases (journal and magazine articles). Research guides covering specific subject areas, tutorials, and the "Ask a Librarian " service provide additional help.

Student Email
Please access your Odessa College Student E-mail, by following the link to either set up or update your account: http://www.odessa.edu/gmail/. **All assignments or correspondence will be submitted using your Odessa College email.**

Technical Support
For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

Important School Policies
For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the Odessa College Student Handbook.

SPECIAL NEEDS: Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

Tentative Schedule:

1/19	1.2	Finding Limits Graphically and Numerically
1/20	quiz 1	Using graphing calculator
1/24	1.3	Evaluating Limits analytically
1/25	1.4	Continuity and one-sided limits
1/26	1.5	infinite limits
1/27	quiz 2	1.3-1.5
1/31	Test	Chapter 1 Test
2/1	2.1	Derivative and Tangent Line Problem
2/2	2.2	Basic Differentiation Rules and Rates of change
2/3	quiz 3	2.1-2.2
2/7	2.3	Product rule
2/8	quiz 4	Product rule
2/9	2.3	quotient rule
2/10	quiz 5	quotient rule
2/14	2.4	chain rule
2/15	quiz 6	chain rule
2/16	2.5	implicit differentiation
2/17	quiz 7	implicit differentiation
2/21	2.6	related rates
2/22	Test	Chapter 2 Test
2/23	3.1	Extrema on an Interval
2/24	3.2	Rolle's Theorem and Mean Value Theorem
2/28	3.3	Increasing and Decreasing Functions and 1st derivative test
3/1	3.4	Concavity and 2nd derivative test
3/2	3.5	limits at infinity
3/3	3.6	summary of curve sketching
3/7	quiz 8	chapter 3 mid
3/8	3.7	Optimization problems
3/9	3.8	Newton's method
3/10	3.9	Differentials
3/14-3/18	Spring Break	Spring Break
3/21	Test	Chapter 3 Test
3/22	4.1	Antiderivatives and Indefinite integration
3/23	4.2	Area
3/24	quiz 9	4.1-4.2
3/28	4.3	Riemann Sums and Definite Integrals
3/29	quiz 10	Riemann Sums and Definite Integrals

3/30	4.4	Fundamental Theorem of Calculus
3/31	4.5	Integration by substitution
4/4	4.5	4.4-4.5
4/5	4.6	Numerical Integration
4/6	quiz 11	Numerical methods
4/7	Test	Chapter 4 Test
4/11	5.1	Natural Log function: Differentiation
4/12	quiz 12	Natural Log function: Differentiation
4/13	5.2	Natural Log function: Integration
4/14	quiz 13	Natural Log function: Integration
4/18	5.3	Inverse Functions
4/19	quiz 14	Inverse Functions
4/20	5.4	Exponential Functions: Differentiation and Integration
4/21	quiz 15	Exponential Functions: Differentiation and Integration
4/25	5.5	Bases other than e and applications
4/26	quiz 16	Bases other than e and applications
4/27	5.6	Inverse trig functions: Differentiation
4/28	quiz 17	Inverse trig functions: Differentiation
5/2	5.7	Inverse trig functions: Integration
5/3	quiz 18	Inverse trig functions: Integration
5/4	Test	Chapter 5 Test
5/5	TBA	Course Wrap up/Review
5/10	Exam	Final Exam (2-4:30 pm)
5/13	Graduation	Spring Graduation