

Mathematics and Computer Science Dept, Sul Ross State University

Syllabus for MATH 2413: Calculus-I

Fall 2009

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- **Instructor:** Dr. Lloyd Edgar S. Moyo. **Office:** ACR 109C.
 - **Email:** LMoyo@sulross.edu **Telephone:** (432) 837-8223.
 - **Office Hours:** TWR 1:30-4:00 pm or by appointment or walk-in.
 - **Class meets:** TR 9:30-10:45 am in MAB 205.
 - **Prerequisite:** MATH 1315 and MATH 1316.
 - **Textbook:** James Stewart, *Calculus: Concepts and Contexts*, 4th edition, Thomson Brooks/Cole, 2008.
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Course Content

We will cover the first four chapters of the textbook. Topics will include Pre-Calculus Review. Limits. Continuity. Derivatives. Techniques of Differentiation. Linear Approximation and Differentials. Applications of Differentiation: Related Rates, Kinematics, Tangent/Normal line to a curve, Maximum/Minimum Values, Derivatives and Curve Sketching, Indeterminate Forms and L'Hospital's Rule, Optimization Problems and Newton-Raphson Method. Antiderivatives.

Expected Student Learning Outcomes

By the end of the course, the successful students should be able to

- *Define and understand the concepts of limit, indeterminate form, continuity, derivative and antiderivative.*
- *Interpret $f'(x)$ in two different ways.*
- *Apply differentiation to solve applied problems such as optimization problems, approximation problems and related-rates problems.*
- *State L'Hospital's Rule and apply it to evaluate different indeterminate forms.*

Mode of Assessment

80% **In-class Exams**, 10% **Class and lab attendance** and 10% **Project**. Your letter grade will be assigned as follows: **A:** [90, 100]; **B:** [80, 89]; **C:** [70, 79]; **D:** [60, 69]; **F:** [0, 59].

Help and Mode of Communication

I am here to help you learn **Calculus-I** and do well in this course. You can get help from me during my office hours or by appointment. You may also send me an e-mail if you need a hint. Remember that you learn **Calculus-I** by doing the

exercises by yourself not by being a spectator. Refrain from the habit of doing homework assignment and seeking my help at the last minute. You may also get tutorial help in ACE Learning Center in Ferguson Hall 213. I will be making announcements in class as well as via email and Blackboard. Course documents such as homework assignments, solutions to homework assignments, handouts, etc will be posted on Blackboard. It is your responsibility to check your email account and Blackboard frequently. During the lab sessions (Labs will be in **ACR 104** on Tuesdays from 4:00-5:45 pm.), you will be working on your homework and I will give you chance to ask me questions on the current/previous homework assignment problems. You will use the last two lab sessions of the semester to work on your projects.

Class Preparation

You are expected to read the textbook prior to every lecture. Check the **Calculus Course Outline** to see the topic for the next lecture.

Class Attendance

You are encouraged to attend all classes on time. For each inexcusable absence, you are responsible for everything that you miss: please get any announcements, lecture notes, handouts, assignments, etc from a classmate. Refrain from making noise while I am lecturing. Asking me a question in class does not constitute noise-making! In fact, I strongly encourage you to ask me questions in class.

Exams and Late Work

You will have four in-class exams. Make-up exams will be given only in special circumstances e.g. illness or away on official university business. Any work handed in late without a valid excuse will not be accepted.

Students with Disabilities

If you have (or believe you have) a disability and would benefit from any accommodations, you may wish to self-identify by contacting the Disabilities Services Office in University Center 211, Tel (432) 837-8178.

Important Dates for Fall 2009

November 6: Last day to drop a course with a grade of **W**. For those in the Education block courses, the date is **September 11**.

November 23-27: Thanksgiving Holidays.