MATH 2413 – Calculus I INET 2017-2018 Syllabus *
(Fall 2017 – Summer II 2018)

* This Generic Syllabus will be supplemented by your instructor’s Syllabus Addendum. Together, these documents serve as the Course Syllabus.

THIS COURSE CAN BE COMPLETED ENTIRELY ONLINE; NO CAMPUS VISITS ARE REQUIRED.

COURSE DESCRIPTION
This course is a study of limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas.

COURSE PREREQUISITES
MATH 1348, MATH 2412, or equivalent.

REQUIRED / RECOMMENDED MATERIALS
MyMathLabStudentAccess Code. The web address for MyMathLab is www.pearsonmylab.com. This code will give you access to the MyMathLab website where all of your work will be done for the course. The MyMathLab website includes an electronic copy of the text, video instruction, and many other helpful features. *A Graphing Calculator is required. A TI-83/84 is recommended.

ISBN / TEXTBOOK
* The textbook is NOT required. An eText is included in MyMathLab.

CERTIFICATION POLICY INET
You must attend and participate in your on-campus or online course(s) in order to receive federal financial aid. Your instructor is required by law to validate your attendance in your on-campus or online course in order for you to receive financial aid. In an online class, simply logging in is not sufficient by itself to demonstrate academic attendance. You must demonstrate that you are participating in your online class and are engaged in an academically related activity. In order to be certified as attending your online mathematics course, you must complete the first section of work in MyMathLab prior to the Certification Date. If you are unclear regarding what constitutes the first section of work, please contact your instructor

COURSE OUTLINE
Chapter 2 – Limits and Continuity, Sections 2.1 – 2.6
Chapter 3 – Differentiation, Sections 3.1 – 3.11
Chapter 4 – Applications of Derivatives, Sections 4.1 – 4.8
Chapter 5 – Integration, Sections 5.1 – 5.6
EVALUATION PROCEDURES
Assessment of your performance will be based upon scores from homework assignments and exams. The percentages for each are as follows and may be altered slightly by the instructor.

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<tbody>
<tr>
<td>Homework (MML)</td>
<td>30%</td>
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<tr>
<td>Quizzes</td>
<td>20%</td>
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<tr>
<td>Midterm Exam</td>
<td>25%</td>
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<tr>
<td>The Midterm Exam covers Chapters 2 and 3</td>
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<td>Final Exam</td>
<td>25%</td>
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<td>The Final Exam is cumulative.</td>
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The instructor reserves the right to require proctored testing at any point during the course.

Information regarding due dates and penalties for late work will be in the instructor’s Syllabus Addendum, which will be available the first day of class.

The student must have an active My Math Lab account at the conclusion of the course. A temporary access code can NOT be used to complete all course work. If you do not have an active MyMathLab access code at the end of the course, you will receive an F. It is the responsibility of the student to contact Pearson Technical Support at 1-800-677-6337 to resolve any issues resulting from the use of temporary access codes.

GRADING SCALE
Grades for the course will be assigned using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
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<tr>
<td>B</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79%</td>
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<tr>
<td>D</td>
<td>60 – 69%</td>
</tr>
<tr>
<td>F</td>
<td>0 – 59%</td>
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Students who have yet to complete the course and fail to participate after the drop date will receive an F in the course.

TEMPORARY ACCESS
MyMathLab provides a Temporary Access Code. This code gives students temporary access to MyMathLab for a two-week period. Once the code expires, students will be locked out of their MyMathLab account until a regular Student Access Code is purchased. It is highly recommended that students purchase the regular Student Access Code BEFORE the two weeks expire to prevent interruptions in their MyMathLab account. Pearson developed the Temporary Access Code to help students receiving financial aid. The availability of this service will depend on its ethical use by instructors and students, and may be discontinued at the discretion of Pearson at any time. Students completing the entire course using the Temporary Access Code will receive a grade of F regardless of course performance. A regular MyMathLab Student Access Code must be purchased in order for students to receive a grade based on course performance.

TECHNICAL SUPPORT
It is the responsibility of the student to contact Pearson Technical Support to resolve any technical issues. Visit http://247pearsoned.custhelp.com/app for assistance.
CVC STUDENT LEARNING OUTCOMES
1. Prove limits using the formal definition and calculate various problems using properties of limits. (THECB #s 1&2)
2. Find instantaneous rate of change, continuities, and tangent lines. (THECB #s 1,2&3)
3. Compute the derivative as a limit and differentiate transcendental and algebraic functions using rules of differentiation. (THECB #s 3&4)
4. Solve related rates, linearization and differential problems. (THECB #5)
5. Use first and second derivatives to find absolute and local extrema, to sketch graphs of functions, to solve optimization problems, and to find roots of functions using Newton’s method. (THECB #2)
6. Derive the definite integral as a limit and use the Fundamental Theorem of Calculus, properties of definite and indefinite integrals, and the substitution method to evaluate integrals with applications. (THECB #s 6&7)

TEXAS HIGHER EDUCATION COORDINATING BOARD (THECB) LEARNING OUTCOMES
1. Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.
2. Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.
3. Determine whether a function is continuous and/or differentiable at a point using limits.
4. Use differentiation rules to differentiate algebraic and transcendental functions.
5. Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.
6. Evaluate definite integrals using the Fundamental Theorem of Calculus.
7. Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

TEXAS CORE OBJECTIVES FOR STUDENT LEARNING
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the following skills are in focus.

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication.
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

MATH 2413 develops Critical Thinking, Communication, and Empirical and Quantitative Skills by requiring students to collect, analyze, and define characteristics of velocity functions from their graphs.

INSTITUTIONAL POLICIES
Institutional policies relating to this course can be accessed from the following link:
www.cedarvalleycollege.edu/syllabipolicies