MATH 2415 – Calculus III 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 advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral including Green's Theorem, the Divergence Theorem, and Stokes' Theorem.

COURSE PREREQUISITES
MATH 2414 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
Calculus Early Transcendentals 2nd Ed, by Briggs, Cochran, Gillett.

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

CERTIFICATION POLICY
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 12 Vectors and the Geometry of Space
Chapter 13 Vector-Valued Functions
Chapter 14 Partial Derivatives
Chapter 15 Multiple Integrals
Chapter 16 Integration in Vector Fields
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.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework (MML)</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes (5)</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
<tr>
<td>The Final Exam is cumulative</td>
<td></td>
</tr>
</tbody>
</table>

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>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79%</td>
</tr>
<tr>
<td>D</td>
<td>60 – 69%</td>
</tr>
<tr>
<td>F</td>
<td>0 – 59%</td>
</tr>
</tbody>
</table>

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. Sketch the graph of curves in two and three dimensions; in addition, sketch surfaces in three dimensions in the rectangular, cylindrical, and spherical coordinate systems.
2. Solve problems of arc length, curvature, projectile motion, and planetary motion using the properties of multi-dimensional vector-functions.
3. Solve multivariable calculus-related problems of contour mapping, rates of change, function estimation, extrema, and optimization.
4. Solve multiple integration application problems; specifically, find the volume and mass of a general solid, the inertia and centroid of a lamina and a solid, and the average value and area of a surface.
5. Use the calculus of vector fields to solve line and surface integral problems, stressing their respective relation to energy and flux problems in physics.

TEXAS HIGHER EDUCATION COORDINATING BOARD (THECB) LEARNING OUTCOMES
1. Perform calculus operations on vector-valued functions, including derivatives, integrals, curvature, displacement, velocity, acceleration, and torsion.
2. Perform calculus operations on functions of several variables, including partial derivatives, directional derivatives, and multiple integrals.
3. Find extrema and tangent planes.
4. Solve problems using the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes' Theorem.
5. Apply the computational and conceptual principles of calculus to the solutions of real-world problems.

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