MATH 2414
Calculus II

Instructor:
Office:
Office Phone:
E-mail Address:

Course Description: 4 semester credit hours
A continuation of differential and integral calculus with differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Emphasis on geometric and physical applications

Prerequisites: MATH 2413


Course Materials: TI-83Plus or TI-84Plus Graphing Calculator, MyMathLab Access Code

Student Learning Outcomes: Upon successful completion of this course, students will:
1. Use the concepts of definite integrals to solve problems involving area, volume, work, and other physical applications.
2. Use substitution, integration by parts, trigonometric substitution, partial fractions, and tables of anti-derivatives to evaluate definite and indefinite integrals.
3. Define an improper integral.
4. Apply the concepts of limits, convergence, and divergence to evaluate some classes of improper integrals.
5. Determine convergence or divergence of sequences and series.
6. Use Taylor and MacLaurin series to represent functions.
7. Use Taylor or MacLaurin series to integrate functions not integrable by conventional methods.
8. Use the concept of polar coordinates to find areas, lengths of curves, and representations of conic sections.

MyMathLab(MML) Technical Support:
➢ A student experiencing any problems with their MML account at any time during the semester should contact Technical Support IMMEDIATELY. It is the student's responsibility to contact the Technical Support Team for help in correcting the problem as soon as the problems are encountered
➢ Pearson MML Technical Support:
   (Tel)800-677-6337  Monday-Friday  11am-7pm   (http://247.support.pearsoned.com)

Evaluation Methods:

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<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
<td>A=90%-100%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
<td>B=80%-89%</td>
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<tr>
<td>Exams</td>
<td>40%</td>
<td>C=70%-79%</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
<td>D=60%-69%</td>
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<td>F= Below 60%</td>
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Class Policy:

- There are no make-up exams. Missed exam for any reason is the student’s first attempt. The second attempt must be taken according to the class schedule.
- Any exception to the No Make-Up Exam policy is rare. Request for any special consideration must be made to the Instructor in writing by the end of the same day of the first attempt. The Instructor will forward the request to the Mathematics Division Chair, Susan Moczygemba at susanm@coastalbend.edu for consideration.
- Students have infinite attempts to complete and/or improve Homework and Practice Exam (Quiz) grades before the respective due dates expire. The minimum score required for completing these assignments is 70% and can be completed using the student’s notes, textbook, and/or Help Features in MML.
- Students have 2 attempts for each scheduled Chapter Exam. The first attempt will be taken during lecture as scheduled on the Course Calendar for this course and will be administered by the Lecture Instructor or by a CBC Testing Center. The second attempt will be scheduled to be taken during lab the following week and will be administered by the Lab Instructor or CBC Testing Center. Only the Formula Sheet and required calculator will be allowed to be used on Chapter Exams and Final Exam.
- Students taking exams outside of the designated labs on campus, dates, and times scheduled by the Lecture Instructor will be in violation of the rules concerning Scholastic Dishonesty and will receive an “F” in the course.
- Homework is the prerequisite for the Chapter Practice Exam (Quiz) and must be completed with a minimum score of 70%.
- The Chapter Practice Exam (Quiz) is a prerequisite for the Chapter Exam and must be completed with a minimum score of 70% prior to the scheduled exam date.
- There are no prerequisites for the Practice Final Exam or the Final Exam.
- The class will follow the course calendar and maintain its schedule regardless of student absences, instructor absences, bad weather, etc. in order to complete the required college curriculum for this course.
- All required assignments (Homework, Quizzes, and Exams) not completed with the stated minimum score by their respective due dates will receive a zero.

Student Behavior: College students are expected to attend class promptly and be prepared to learn everyday. Dual Credit students and Concurrent Enrollment students are official college students as well and are expected to perform at the college level and to honor all policies and deadlines published by the college or by the instructor. Every lecture and lab is important and the student is responsible for any missed material. Address your Instructors, fellow students, and CBC employees respectfully. Laptops will not be allowed in lecture, unless approved by the instructor. Turn off your cell phone(s) before entering the classroom and put away in your bag. Cell phones will not be allowed anywhere on or under your desk, on you, and will not be used as calculators. Handling your cell phone for any reason during lecture or lab will be cause for dismissal from class. Exceptions may be approved by the instructor. If you must be contacted while in class for any reason, then it is your responsibility to:

- Inform your Instructors well in advance before class begins that you may be contacted during the day and possibly have to leave campus and be absent.
- Provide the person who must contact you with your daily class schedule. This should include Building, Name of Building Secretary, Classroom number, and the days and times when you may be reached. Times that you may be reached while on campus must be before or after classes begin.
- Leave this information with the secretaries of the buildings in which your classes are being held.

In order to maintain and preserve a constructive learning environment, disruptive behavior will not be tolerated. Disruptive behavior in class by any student(s) may result in dismissal from class or may result in suspension from the class/college. Academic dishonesty is also cause for dismissal and/or suspension from college. Refer to the Student Handbook for Academic and Disciplinary Policies. Students will be marked absent for leaving class before the end of the period for any reason.

Fall 2012
Attendance Policy:
A student with excessive absences (more than 6 hours total for Lecture and/or Lab) will be reported to the registrar’s office of Coastal Bend College and are in danger of being dropped from the class. Being dropped from a course may have a negative impact on a student’s full-time status.

**Lab attendance is a requirement**, not an option. Students are required to attend a 1 hour 20 minutes lab according to the lab schedule for reinforcement and practice of the topics taught in class. Students who do not attend lab will be dropped from the course.

Academic Dishonesty:
Each student is charged with notice and knowledge of the contents and provisions of Coastal Bend College’s rules and regulations concerning student conduct. All students shall obey the law, show respect for properly constituted authority, and observe correct standards of conduct. Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, work, research or self-expression. Academic work is defined as, but not limited to, tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations; and homework. Scholastic dishonesty shall constitute a violation of these rules and regulations and is punishable as prescribed by Board policies. Students will be held accountable for infractions of the following codes of conduct:

1. **Collusion**: having someone else do your assignments for you which are required for the course
2. **Cheating**: copying from another student’s test/work or using unauthorized materials or electronic or web-based sources during the test; giving or receiving aid unauthorized by the instructor during assignments or tests.
3. **Plagiarism**: unacknowledged quotation and/or paraphrasing of some else’s words, ideas, or data and passing it off as your own work submitted for credit or grade.
(Refer to Student Conduct section in the CBC Student Handbook for additional information.)

**Cheating on a math test will result in the student receiving a grade of zero for the test and an “F” for the course**

ADA Statement:
No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the College District, or be subjected to discrimination by the College District. Nor shall the College District exclude or otherwise deny equal services, programs, or activities to an individual because of the known disability of an individual with whom the individual is known to have a relationship or association. 42 U.S.C 12132; 28CFR 35.130(g)

Students with disabilities, including learning disabilities, who wish to request accommodations in this class, should contact the Counseling Office as soon as possible to make arrangements. In accordance with federal law, a student requesting accommodations must provide documentation of disability to the Special Needs Counselor. For more information, please go by the Counseling Office, or contact:

- Beeville Counselor, Eddie Rojas, edrojas@coastalbend.edu (361) 354-2731 or 2720
- Alice Counselor, Dee Berthold, deedeec@coastalbend.edu (361) 664-2981, Ext. 3025
- Kingsville Counselor, Pete Trevino, ptrevino@coastalbend.edu (361) 592-1615
- Pleasanton Counselor, Terry Villanueva, terry@coastalbend.edu (830) 569-4222, Ext. 1203

Students who are requesting accommodation must provide the instructor with a letter of accommodation from the Counseling Office (OSD). Accommodations can only be made after the instructor receives the letter of accommodation. Coastal Bend College does not discriminate on the basis of race, creed, color, national origin, gender, age, or disability.
Dropping Classes and Withdrawal Policy (Coastal Bend College Catalog/Student Handbook 2011-2012)

Statement on Dropping Classes p.45:

(Any student who stops attending a class, MAY be dropped with a grade of “Q”. BUT the “Q” grade is not automatic. Any student who stops attending a class late in the semester will probably receive a grade of “F.” The “F” grade applies to any class that the student stops attending EVEN IF PASSING at the time he/she stopped attending! The only sure way to drop a class safely is to complete a drop/add form and return it to the registrar’s office prior to the drop deadline. Students may submit a written request to the registrar’s office to be dropped from a course. The request must be postmarked prior to the deadline.

Students should know that dropping a class can impact:

1. Financial Aid
2. Scholarships
3. Veteran’s Benefits
4. And, eligibility for residency in Benton Hall or college apartments.)

It is the student's responsibility to initiate and confirm all withdrawals (W) in this course. The Instructor will withdraw students for excessive absences. Students with excessive absences should verify with the Registrar and Financial Aid to determine consequences of being withdrawn from this course. After the withdrawal date, neither the student nor the Instructor may initiate a withdrawal.
MATH 2414 Course Outline

UNIT 1: Area between curves, volumes of solids of revolution by disc and shell methods, volumes of solids with known cross sections, arc length, surfaces of revolution, work, moments, center of mass, and centroids, and fluid pressure and fluid force.

UNIT 2: Techniques of integration, trigonometric integrals and substitutions, partial fractions, integration by tables and other techniques, indeterminate forms and L’Hopital’s Rule, and improper integrals.

UNIT 3: Sequences, series, tests for convergence, Taylor series, and applications.

UNIT 4: Conic sections, including parabolas, ellipses, and hyperbolas, plane curves, parametric equations, polar coordinates, polar graphs, area and arc length in polar coordinates, and polar equations of conics and Kepler’s laws.

UNIT 5: Vectors and the geometry of space; vectors in the plane, space coordinates and vectors in space, the dot and cross product of two vectors, and line and planes in space.