1. **Instructor:** Kannanut Chamsri

2. **E-mail:** kannanat.chamsri@ucdenver.edu

3. **Time and Location:** Tuesday/Thursday 12:00n - 1:50p in NC1315.
   PLEASE TURN OFF YOUR CELL PHONES DURING OUR LECTURE PERIODS!

4. **Office Hours:** 9:30a-11:30a on Thursdays up on the 6th floor of the CU Bldg (MATH dept.) or by appointment.

5. **Website:** math.ucdenver.edu/~kchamsri
   Also: math.ucdenver.edu/~mkawai
   This is our course captain’s website. Check here if you missed a lecture.

6. **Course Description:** Topics include vectors, vector-valued functions, partial differentiation, multiple integration, and vector calculus.

7. **Prerequisite:** MATH 2411 [Calculus II]

8. **Textbook:** *Calculus: Early Transcendentals*, Briggs, First edition. We cover four chapters, beginning with Chapter 11.
   The Calc. III portion can be purchased in the PAPERBACK version (less expensive and all the corrections have been made):
   “*Multivariable Calculus*”.
   If you have the MyMathLab subscription from using Briggs in a previous semester, then you should not need to purchase a new subscription.
   For students who have not previously used Briggs, the cost of MyMathLab is $75 and you WILL need to purchase it in order to complete the on-line homework problems.

9. **Technology:** A graphing calculator (TI-89) is often very handy during lectures to check boardwork. We do NOT use them during the tests.

10. **Course Goals:**
    
    (a) To reinforce knowledge gained from Calculus I & II.
    
    (b) To extend that knowledge to multivariable calculus.
    
    (c) To demonstrate the immediate relevance and applicability to other disciplines (Physics, in particular).
11. **Grading:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MyMathLab/HW/Quiz/Inquiry</td>
<td>20%</td>
</tr>
<tr>
<td>Test #1</td>
<td>25%</td>
</tr>
<tr>
<td>Test #2</td>
<td>25%</td>
</tr>
<tr>
<td>Uniform Final</td>
<td>30%</td>
</tr>
</tbody>
</table>

NOTE: If you decide that you do not want the first category to count toward your final course grade, then you can elect to make the Uniform Final count 50% of your total grade. You MUST inform me in writing that this is what you want to do BEFORE you take TEST #2.

Your final course grade will be determined by the following percentage scale:

- 92.0 or more = A
- 90.0 - 91.9 = A−
- 87.0 - 89.9 = B+
- 81.0 - 86.9 = B
- 79.0 - 80.9 = B−
- 76.0 - 78.9 = C+
- 70.0 - 75.9 = C
- 55.0 - 69.9 = D
- Below 55.0 = F

12. **MyMathLab Homework:**

   (a) The course ID is: chamsri56183 (School ZIP is 80202).
   The information sheet should tell you how to log in, especially if you already have a MML account with Pearson. Be sure to check the due dates for the various Chapter HW assignments!!! There are approximately 160 problems to solve. Some have multiple parts.

   (b) On each problem, you may have 3 attempts. If you ask MyMathLab to “Show Me How to Solve This”, then you will use up one of the attempts. Be very careful on how you input the final answers!

13. **Regular Written Homework:**

   (a) There will be exactly 10 written assignments worth 10 pts. each. They will be graded for accuracy, so it is important to use technology whenever possible to check your answers!

   (b) Homework is due at the beginning of lecture on the date printed on the assignment sheet.

   (c) I do NOT drop any scores from this group.

   (d) NO LATE HOMEWORK WILL BE ACCEPTED since these are always due on a Thursday. If you had started working on it on the previous weekend, then you should be able to ask reasonable questions on the Tuesday before it is due.

   I do NOT accept faxed or e-mailed homework.
You will receive a cover sheet. You will receive NO credit if you simply just write down a bunch of calculations. If a non-MATH person cannot understand HOW you are solving the problem, then you receive NO credit.

For each question [see written sample], you MUST:

(i) give a short summary of the problem statement. I should NOT need to refer back to the text to determine the problem statement.
   [The summary may be as short as “Evaluate the integral.”]
(ii) EXPLAIN what you are doing! Writing only a bunch of equations does NOT constitute solving! Showing that you understand the problem solving process is key!
(iii) organize all the work for the solution neatly. Do NOT cram everything together on one page. It pays to do most of the work on scratch paper first, and then copy your final solutions to the engineering pad.
(iv) box or highlight your final answers. I hate playing hide-and-go-seek when grading your assignments.

14. Quizzes <You can change this below!>

(a) There will be quizzes every Thursday before the end of the class for about 10 to 20 minutes begin Jan 26, 2012. Approximately 5 questions will be picked from homework problems.

(b) I do NOT drop any scores from this group.

15. How I Calculate the Grade in the Category Marked: “MyMathLab/Inquiry/HW/Quiz

(a) The MyMathLab questions (4 chapters) compose 25% of this category.
(b) The Guided Inquiry composes 25% of this category.
(c) Your regular written homework grades compose 25% of this category.
(d) Your quiz grades compose 25% of this category.
(e) These four percentages will be averaged to form the score in this category.
16. In-Class Tests:

(a) We strive to provide a short review prior (the previous lecture period) to each in-class test, but our schedule is quite tight. Be sure to ask questions about the review material which will be handed out two sessions before each exam.

(b) No technology is allowed on the test. We supply you with a note sheet of formulas prior to the test.

(c) There are severe consequences for not contacting me prior to test time if you cannot take the tests at the appointed time! (E-mail!!!)

17. Uniform Final:

(a) The date is Saturday, 5 May 2012 at 9 a.m. (to 12 noon). Make plans now! You cannot take the test early. We only reschedule your uniform final if you have another final exam on that Saturday. We prefer that you take our final that afternoon instead. The makeup day is the following Monday morning.

(b) The final exam will be given in two parts. The first part will be 75 minutes long. We will have a short 15 minute rest room break, and then the second part will be 90 minutes long.

(c) Unless you know that you may have a possible emergency during this time, you may NOT have your cell phones on during the exam. You may leave them on vibrate, and if you need to take a call, then inform the proctor.

(d) You may NOT leave the testing room for a rest room break during either part. Be prepared before you start each part! If you leave during a part, then you may NOT complete that part.

(e) See Mike Kawai if you have any issues with this date/time.
18. **Academic Honesty:**

   (a) I HAVE NO TOLERANCE FOR CHEATING. Cheating of any kind on a quiz or test will result in a course grade of “F”. It is possible that you will also be expelled from the University.

   (b) It is okay to collaborate on homework, but if there is obvious evidence that you are simply COPYING homework solutions from a solutions manual or from another student, then you will receive a failing grade on that assignment.

   You are responsible for being attentive to or observant of campus policies concerning academic honesty as stated in the CLAS Academic Integrity and Honor Code.

19. **Drops & Incompletes:** You have until Friday, 2 April (5:00pm) to drop this course with only the instructor’s (but not the Dean’s) signature. The incomplete policy of the department and college is strictly enforced. Incomplete grades (I) are NOT granted for low academic performance. To be eligible for an incomplete grade, a student MUST been ALL of the following requirements:

   (a) The student successfully completed a minimum of 75% of the course.

   (b) There were special circumstances **beyond the student’s control** that precluded the student from attending class and completing the course. Verification of these special circumstances is required.

   (c) The student has made arrangements to complete the missing coursework with the *original* instructor via a CLAS Course Completion Agreement.

   The Course Completion Agreement is available from the CLAS Advising Office (NC 2024) or from the Department of Mathematical Sciences (6th floor of the CU-Denver Building).

20. **Religious Holiday Accomodations:** You must inform me *at the beginning of this semester*, in order for me to accomodate any rescheduling of your coursework.

21. **Disability Accomodations:** To be eligible for accomodations, students *must* be registered with the UCD Office of Disability Resources and Services (DRS). The office is located at NC 2514 [(303)556-3450]. Faculty cannot arbitrarily decide to give a student extra time, extra assistance, or other forms of aid unless it is formally mandated by the DRS.
Tentative Schedule (Tues./Thurs.)

01/17: Sect. 11.1 (Vectors in 2D)
       Sect. 11.2 (Vectors in 3D)

01/19: Sect. 11.3 (Dot Products; Projections)

01/24: Sect. 11.4 (Cross Product)

01/26: Sect. 11.5 (Lines & Curves in 3D)

01/31: Sect. 11.6 (Calculus of Vector-Valued Functions)
       Sect. 11.7 (Motion in Space)

02/02: Sect. 11.8 (Length of Curves)

02/07: Sect. 11.9 (Curvature & Normal Vectors)

02/09: Sect. 12.1 (3D Planes & Surfaces)

02/14: [TUESDAY] TEST #1

02/16: Sect. 12.2 (3D Graphs & Level Curves/Contours)
       Sect. 12.3 (Limits & Continuity)

02/21: Sect. 12.4 (Partial Derivatives)

02/23: Sect. 12.5 (Multivariable Chain Rule)

02/28: Sect. 12.6 (Directional Derivatives & Gradient)

03/01: Sect. 12.7 (Tangent Planes & Linear Approximation)

03/06: Sect. 12.8 (Maximum/Minimum Problems)

03/08: Sect. 13.1 (Double Integrals over Rectangular Regions)

03/13: Sect. 13.2 (Double Integrals over General Regions)

03/15: Sect. 13.3 (Double Integrals in Polar Coordinates)

03/27: [TUESDAY] TEST #2

03/29: Flexible day.

04/03: Sect. 13.4 (Triple Integrals)
       Sect. 13.5 (Triple Integrals in Cylindrical & Spherical)

04/05: Sect. 13.6 (Integrals for Mass Calculations)
04/10: Sect. 14.1 (Vector Fields)
04/12: Sect. 14.2 (Line Integrals)
04/17: Sect. 14.3 (Conservative Vector Fields)
04/19: Sect. 14.4 (Green’s Theorem)
04/24: Sect. 14.5 (Divergence & Curl)
04/26: Sect. 14.6 (Surface Integrals)
05/01: Sect. 14.8 (Divergence Theorem)
05/03: Review & catch-up.
05/05: [Saturday!] **UNIFORM FINAL** (room to be announced later).

9 a.m. to 12 noon.