

Delta College
Class Information Sheet

COURSE: Math 03 – VECTOR CALCULUS
4 Units Associate Degree Credit Applies
UC/CSU Transferable

Instructor: Dr. Nick Bykov

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Prerequisites: Math 02 with a grade of “C” or better.

Catalog Description: This course is an introductory course in the study of calculus of multivariate functions.

The course includes a computer laboratory component complementing the lecture component. Lecture and laboratory topics include vectors, parametric curves, polar, cylindrical, and spherical coordinates, partial differentiation, multiple integrals, line and surface integrals, and the theorems of Gauss, Stokes, and Green. (UC, CSU, CAN, MATH 22, CAN MATH SEQ C with both MATH 1, 2, and 3)

Textbook: “CALCULUS, EARLY TRANSCENDENTALS”, Current Edition,
by Anton, Bivens, Davis. **REQUIRED.**

* Chapters 12 through 16 will be covered *

“STUDENT’S SOLUTION MANUAL” to this textbook. RECOMMENDED.

Also available from the publisher: Student’s Study Guide, Videotapes, Interactive CD-ROM, Internet Tutorial (these items are listed for your information only).

Calculator: The use of a **graphing calculator** is assumed (allowed on exams).

Calculators with symbolic algebra are NOT allowed on exams.

Purpose of the Course:

General Aims: To provide the student with a basic knowledge of Vector Calculus.

Specific Course Objectives: Upon completion of this course, the student will be able

1. To use vectors and basic operations on vectors and vector-valued functions.
2. To set up and evaluate double, triple, line and surface integrals occurring in certain types of geometric and physical problems.
3. To calculate partial derivatives and differentials of functions of two and more variables.
4. To find extrema of multivariable functions.
5. To find differential characteristics of curves in two and three space, such as curvature, normal, tangent and binormal vectors.
6. Apply Green’s, Gauss’ and Stokes’ Theorems to vector fields.

Content of the course: See SYLLABUS

*** MATH LAB – Shima 217-A ***

*** TUTOR CENTER – SHIMA 217 ***

Course Requirements and Obligation of the Student:

1. You are expected to study AT LEAST two hours OUTSIDE the classroom for every hour of class. This includes reading the text, doing homework, studying for exams and correcting errors from previous exams and assignments.
2. You will be expected to think critically about problems and try to find the appropriate technique to solve them.
3. You should READ THE TEXTBOOK, not just work with problems from it. Try to read material before its covered in class.
4. Please, note, that it is *your responsibility* to get help when the material becomes difficult or confusing. Some of your options are MY OFFICE HOURS, TUTORING, AND MATH LAB.
5. Please, also note, that it is *your responsibility to drop the class*, if your name appears on the final grades roster, I will *not* accommodate any future attempts to change the assigned grade.

Homework: Homework will be assigned daily (see Class Schedule). I will try to start every class answering homework questions, though time, usually, does not permit to go over all requested problems. Homework is not going to be graded, but you should realize that without completing homework your chances to pass tests are extremely low.

Tests: There will be 5 chapter tests.

If you score at least 60% on each of the 5 tests, I will drop your **lowest test score**.

All tests are closed book/notes, ONE 3x5 index card, handwritten by you, with formulas and theorems is allowed. I reserve the right to check your "cheat card" at any time during an exam. The tentative dates of the tests are listed in the COURSE SYLLABUS.

If you have to miss a test due to sickness, jury duty, family emergency or similar, the score for the missed test may be replaced with your Final exam score at instructors' discretion.

Do your best to notify me immediately in this situation.

Comprehensive Final Exam is a Multiple Choice Test.

"Mathematica" Project will be assigned in the last month of class.

Attendance: Attending every class meeting is to your own benefit.

Roll will be taken. If you are absent from 4 meetings *during the first four weeks of the semester*, or accumulate **6 absences total**, you will be dropped from the class. Please, show respect to your classmates and instructor by arriving before the class starts and leaving after it finishes. ***You are required to stay for the whole class session*** (going to the bathroom or medical emergencies excluded), please, let me know **BEFORE** the class if you need to leave early.

Ethics: Any form of cheating on exams will not be tolerated. A copied problem on an exam results in a **zero given for the entire exam and this zero will be counted towards your grade (not "droppable")**. No phones, cameras or any other electronic devices (calculators excluding, of course) are permitted anywhere in sight on exams, **consequences as above**.

Overall Evaluation: Chapter Tests - 75%, Final Exam - 15%, Project - 10%

LETTER GRADES: A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 00-59%

*** 69.9% rounds to 69, etc.***

If you have any questions, problems or suggestions do not hesitate to contact me at any time, we are working together on the common goal. I hope that you enjoy the course.