MATH 229 - VECTOR CALCULUS

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<u>Office Hours</u> tentatively 2-3pm MW, 3-4pm TR (hours and location subject to change). If these times aren't convenient for you, you can make an appointment to see me at some other time. Please note that my building has stairs, and I can meet students at another location if desired.

☞ **Masks, worn covering the nose and mouth, are required for in-person office hours.** 🗢

<u>Textbook</u> *Vector Calculus with Chemical Applications,* by Profs. J. Howell & B. LeMesurier (free e-book available through OAKS). The textbook will be supplemented by course notes, also available through OAKS.

<u>Course Objectives</u> By the end of the course, students should: be familiar with multidimensional coordinate systems and converting coordinates, functions, and equations from one coordinate system to another; be able to use vectors to describe lines and planes in multidimensional space; be able to represent geometric actions and transformations through matrix operations on vectors; be able to represent functions using infinite series; be able to calculate partial derivatives of multivariate functions; be able to calculate integrals of multivariate functions; be able to model chemical processes using systems of differential equations. These outcomes will be assessed on the final exam.

<u>Course Pre-requisite</u>   C- or better in Math 120 or Hons 115

<u>Meeting Times and Class Format:</u> The scheduled meeting times are MWF 12-12:50pm and TR 12:15-1:30pm in Maybank 223. *Most classes will take place online, via Zoom, at the scheduled meeting times.* The main exceptions will be in-class tests. *These arrangements are subject to possible change, depending on public health conditions. Moreover, alternative arrangements can be made for any students who do not feel it is safe or possible for them to attend an in-person class or test. As much as possible, classes will be recorded and posted on OAKS.*

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<u>Course Work</u> Daily reading assignments will be given from the textbook/course notes . Weekly assignments, based on problems in the textbook, will be given via the online homework system WebWork (details to follow). In addition to in-class tests, there will be occasional quizzes may be administered through online platforms. *You are encouraged to ask about homework problems during class, and to discuss assignments with your classmates. However, what you turn in under your own name must represent your own work.*

<u>Important Dates</u> Dates for in-class tests are Thursdays **Sept. 17, Oct. 8, Oct. 29** and **Nov. 19** (*subject to change).* The last day to withdraw from the class with a grade of W is Wednesday, Oct. 28. There will be no class on Election Day (Nov. 3). Based on the TR meeting time, the **final exam** takes place at 1-3pm on Thursday, Dec. 10 (location TBA).

<u>Grading Policy</u>   Your course grade will be based on your work, in the following proportions: 20% homework/quizzes, 20% for each test, and 20% for the final exam. *Your lowest test will be dropped at the end of the semester.* Some degree of subjectivity in grading is inevitable in any course; bearing this in mind, a course grade of 62% or more ensures a D, 70% ensures a C, 80% ensures a B, and 90% an A. Grades may be modified by a plus or minus.

<u>Attendance Policy and Makeups</u> Each student, whether present or not, is responsible for all information disseminated in the course. If you miss a test due to an excused absence, your final exam grade will be substituted for the missed test. Documented excuses will be accepted from the Absence Memo Office (Lightsey Suite 101). For students participating in College-sponsored events, excuses will be accepted in the form of written notification, signed by a faculty or staff member, of dates when classes will be missed.