Introduction To Multivariable Calculus CRN: 85453 (2:30 p.m. – 3:45 p.m. MW in PAM 2030)

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Office Hours: Monday -Tuesday-Wednesday: 1:00 p.m. - 2:00 p.m. or by appointment.

CATALOG DESCRIPTION: Calculus for functions for several variables. Planes and surfaces, continuity, differentiation, chain rule, extreme values, Lagrange multipliers, double and triple integrals and applications, software-based techniques. Partially duplicates 2016, 1224 and 2224.

PREREQUISITE: Math 1226.

If you have SSD form, please share with me immediately.

TEXTBOOK: Calculus: Early Transcendentals, 8th Edition, by James. Stewart, Cengage Learning, 2015

- If you already purchased the textbook for 1225 or 1226 during a previous semester at Virginia Tech, you can use your current WebAssign account. Students should contact Meredith Dudzik of Cengage if you have any problems, using the following email address: meredith.dudzik@cengage.com
- If you do not already have the textbook and WebAssign code from a previous calculus course here at Virginia
 Tech, it will likely be cheapest for you to buy a new textbook bundled with the WebAssign code. <u>Do not</u>
 <u>purchase WebAssign or the textbook through WebAssign's website.</u> The university bookstore has a better
 price.

Here are the textbook bundle purchase options available at the on campus bookstore. All three options include lifetime of edition electronic access to the textbook and a WebAssign code which is required for the class. **Any of these 3 textbook options will be sufficient for the course.**

- 1. Electronic Book Bundle contains WebAssign code w/eBook
- 2. Loose Leaf Bundle contains Loose Leaf Book w/WebAssign code w/eBook
- 3. Hardback Bundle contains Hardback Book w/WebAssign code w/eBook
- There is a two week grace period for the use of WebAssign in the course but in order to access the system
 after that you need a purchased WebAssign code. You will automatically be added to the WebAssign course
 and so you do not need a class code. If you do not have a WebAssign account from a previous calculus
 course taken at Virginia Tech you will receive instructions on how to setup your WebAssign account via your
 primary virginia tech email account based on your PID.

CONTENT: We will cover the material listed on the <u>assignment sheet</u>. Any changes will be announced in class.

TESTS: There will be three in class, closed book, and closed notes tests. These tests will count for a total of 60% of your final grade. Test dates will follow, as close as possible, the course syllabus. Tests are usually in class time. You must take tests on the specified date. **NO make-ups will be given**. If you will miss a test due to a University sponsored activity you must make arraignments beforehand to take the test. A note from a coach verifying this absence is required. For an excused absence, the final exam score will be substituted for the missed test score. If you request an excused absence from a test, you must phone or see me on test day, and present me with a written excuse within three calendar days. Excused absences will include severe illness or death. Being unprepared is not an excused absence. One excused absence is allowed, beyond that you will receive a zero for any missed test.

In Class Test Dates:

1st Test: September 27, 2nd Test: November 1, 3rd Test: December 6

Home Work Assignment: Traditional written home work assignment should be turned in a group or individual. I will clearly write at the beginning of each home work, whether it is a group or individual home work. Each group should have maximum 4 members. A group will submit only one copy of home work. I expect all of you will contribute to all problems. It is not like, two people solved some problems and other two solved the rest. The intension of the group home work is to collaborate with other people. You are allowed to discuss, brainstorm etc with only your group members. You should not change your group very often. For the individual home work, you can discuss with others but do not copy other's solution. The home work (individual/group) problems will be graded randomly picking some, but I will check other problems for completion. You should turn in your home work properly staple together, if not, in case I loose any page, I am not responsible for that. Assignments are due at the beginning of class. No late work will be accepted.

In Class Quiz: In some week, instead of home work, I will give you in class quiz. I will announce you the quiz date sufficient time ahead. There is no difference between quiz and home work weights. Collected homework and quizzes count for a total of 12% of your final grade. At least one homework or quiz grade will be dropped.

WEBASSIGN HOMEWORK: The online part will be delivered using WebAssign. Access to WebAssign is included with the purchase of your textbook (see above). You will be allowed three submissions for each free response question and two submissions for each multiple-choice question on the WebAssign homework assignments. The sum of your highest per question scores will determine the final grade on the assignment. If you have not used WebAssign before there will be a learning curve. To help learn how to use the system there is a graded "Getting Started with WebAssign" homework assignment that is due Friday, September 1. For this assignment only you will be allowed 100 submissions per question. If you add the course late, contact me and I will give you an extension to complete this important assignment. Additional helpful information regarding the use of WebAssign can be found here. WebAssign homework grade will be dropped.

Cell phones should be unseen and unheard during class. You **are not** the exception to this rule. Students who fail to comply will be asked to leave the classroom. Please turn your phone off and **store it away** when you enter the classroom. It should not be left on your desk during class.

ATTENDANCE: Attendance will be taken each class period. Students are expected to attend every class meeting and to arrive on time. To be considered present, a student must be in class and working until dismissed. Each student must personally sign the attendance sheet each lecture class period for attendance credit. Attendance is a requirement for receiving credit on homework/quiz assignments. An absence, due to a University sponsored activity, will not be counted toward the quiz policy provided that written verification from a coach or University sponsor is sent to me. If a student is absent from class, he/she is responsible for all material, announcements and assignments missed.

FINAL: The two part final examination is a <u>comprehensive final exam</u>, which counts for <u>20%</u> of your final grade. The common part, common to all sections, is NOT written by me, and is multiple choice. The section specific part of the final exam is written by me. The Math 2204 final exam will be on <u>Monday</u>, <u>December 18, 2017, 1:05 PM - 3:05 PM</u> location of the final exam will be announced toward the end of the semester. The final exam is a required class meeting that will not be rescheduled for discretionary reasons, for example, conflicts with work schedules and with classes and exams at other colleges. Students simultaneously taking courses at NRCC should check at the beginning of the semester that they will not have a conflict because the Math Department will NOT accommodate such a conflict.

Possible Conflicting CTEs: Same time finals: BIT 2405, BIT 2406, MATH 1226

CTEs within 24 hrs: CS 1044, CS 1114, CS 2505, PSYC 1004, ISE 2014, PHYS 2305, PHYS 2306

Note: Physics and CS often have alternate CTE

GRADING: The conversion of numerical to letter grades will be as follows: 100-94 = A, 93-90 = A-, 89-87 = B+, 86-84 = B, 83-80 = B-, 79-77 = C+, 76-74 = C, 73-70 = C-, 69-60 = D, 59 - 0 = F.

UNDERGRADUATE HONOR SYSTEM: The Undergraduate Honor Code pledge that each member of the university community agrees to abide by states:

"As a Hokie, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

Students enrolled in this course are responsible for abiding by the <u>Undergraduate Honor Code</u> for <u>all graded work</u>. All tests and quizzes must be entirely the student's own work. Copying a solution from any source for a test, homework/quiz assignment or Matlab worksheet is prohibited. A student's name on a group assignment signifies both that the student contributed significantly to the work on the assignment and that all of what is on the assignment accurately represents the student's own understanding of the material. A student who has doubts about how the Honor Code applies to any assignment is responsible for obtaining specific guidance from the course instructor before submitting the assignment for evaluation. Ignorance of the rules does not exclude any member Koofers may not be used.

For additional information about the Honor Code, please visit: https://www.honorsystem.vt.edu/ or consider attending one of the "Understanding the Virginia Tech Honor Code" sessions for students sponsored by the Office of Undergraduate Academic Integrity. These sessions will be interactive sessions in which the Office of Undergraduate Academic Integrity discusses what constitutes a violation of the Honor Code and ways in which students can avoid violations of the Honor Code. Specific examples will be utilized to assist students in better understanding the University's expectations. The same material will be covered at each session. You are encouraged to attend one of the sessions below:

- a. Tuesday, September 5, 2017: 6:30 p.m.-8:00 p.m. in the Graduate Life Center Auditorium
- b. Wednesday, September 6, 2017: 6:30 p.m.-8:00 p.m. in the Graduate Life Center Auditorium
- c. Thursday, September 7, 2017: 6:30 p.m.-8:00 p.m. in the Graduate Life Center Auditorium
- d. Friday, September 8, 2017: 6:30 p.m.-8:00 p.m. in the Graduate Life Center Auditorium

Students who plan to attend a session will need to pre-register by emailing honorsys@vt.edu at least one hour prior to the session.

RESOURCES AVAILABLE: There are many resources available to you if you are having difficulty with the course, besides coming to my office for individual help. The math tutoring lab is open 4:30pm to 9:30pm Sunday through Thursday. The <u>Student Success Center</u> offers individual tutoring by appointment for many subjects. Information about private tutoring can be found <u>here</u>. Make sure to read the Math 2204 homepage and the course scholar site regularly.

The use of commercially purchased notes (selling and buying) will not be permitted in this class. Any violation of this policy will be considered an Honor Code Violation. Recording of lectures is not permitted without prior consent from the instructor.

Any student with special needs or circumstances should feel free to meet with me during office hours.

Exceptions to the attendance and make-up policies will be made in the event of serious illness or personal emergency at my discretion. If such a situation arises, please be sure to contact your dean's office and me; I will receive a letter from the dean's office explaining the circumstances.

*IMPORTANT: If you are not on the class roll that comes out after the last add date, immediately check your schedule at a terminal and start attending the proper section. For no foreseeable reason (computer and registrar personnel mistakes included) will you be allowed to stay in the wrong section or to drop a section for which you are actually enrolled after the last drop date. By simply attending a section you will not be placed on its roll.

IMPORTANT DATES:

- Last Day to Add Classes: Friday, September 1, 2017
- Labor Day: No classes
- Last Day to Drop Classes Without Grade Penalty: Friday, October 6, 2017
- Fall Break: Friday, October 13, 2017
- Last Day to Resign Without Grade Penalty: Monday, October 23, 2017
- Deadline for Undergraduates to request rescheduling of final examinations that conflict or constitute a third exam in 24 hours (see your Academic Dean): Friday, November 17, 2017
- Thanksgiving Break: Saturday, November 18, 2017 Sunday, November 26, 2017
- Last Day to Apply for W grade policy/Course Withdrawal: Wednesday, December 13, 2017
- Classes end: Wednesday, December 13, 2017
- FINAL EXAMINATION: Monday, December 18, 2017, 1:05 p.m. 3:05 p.m. Room TBA