MATH 237-003	Multivariable Calculus	Spring 2024	
12:40 – 1:35 Mondays and (Fridays	e)* SH 1101	4 credit hours	
12:45 – 2:05 Tuesdays and Thursday	ays SH 1101		
*This class meets does NOT meet on these days: 1/26, 2/2, 2/16, 3/1, 3/15, 4/5, 4/19. (Based on 55- and 80-minute classes. Subject to adjustment due to snow-days, school closures, etc.)			
Instructor: Dr. Tom Richmond	СОНН 3106 (5	13) 666-1159	
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**Purpose of Course:** In the prerequisite courses, you have studied the concepts of differentiation and integration applied to planar curves. In this course, you will extend these concepts to curves or surfaces in 3-dimensional space, and more generally, to functions  $f: \mathbb{R}^n \to \mathbb{R}^m$ .

9:05-09:45 MF, 2:10-2:45 TR, and by appointment.

## **Learning Outcomes:**

**Office Hours:** 

- Interpret information presented in mathematical form.
- Communicate mathematical information symbolically, visually, and/or numerically.
- Know the difference between functions of a single variable and functions of several variables, and be able to distinguish between ordinary derivatives, partial derivatives, and directional derivatives
- Understand multiple integration and line integration, and be able to use them to find area, volumes, and lengths.
- Understand how to apply appropriate mathematical models to solve real-world problems.

**Prerequisite:** MATH 137 with a grade of C or better.

**Attendance Policy:** Registration in a course obligates the student to be regular and punctual in class attendance. Four or more unexcused absences from class may result in an "F" as final course grade. A student absent from class bears full responsibility for subject matter and announcements missed.

**Testing and Grading:** Students are responsible for material presented in class and the material in the text. There will be four one-hour tests, each worth 100 points. The comprehensive final exam, to be given at 1:00 MondayApril 29, is worth 150 points. Homework will be assigned regularly on WebAssign, and will be scaled to 120 points. There may be up to 50 points of other daily grades, consisting of written homework, quizzes, Mathematica exercises, or projects. Grading will follow the 10-point scale. Grades from the official gradebook will be posted to Blackboard, but Blackboard is not the official gradebook.

## Text:

This course participates in The WKU Big Red Backpack. This program is designed to provide immediate access to required materials for all students at prices cheaper than any other option. *Required materials will be delivered to you automatically by enrolling in this course unless you choose to opt-out*. By participating in this program, The WKU Store will bill your Student Billing account, and you will see a charge appear under this Term along with Tuition and Fees ("Account Summary by Term" under the Student Services tab) labeled as "The WKU Store Purchases" after the Add/Drop period.

The course materials provided are: Multivariable Calculus (electronic access), 11<sup>th</sup> Ed., Larson, Edwards, Cengage Learning, with WebAssign code. ISBN for optional low-cost looseleaf copy: 9780357001349

WebAssign: By your registration in this course, you may access WebAssign through Blackboard.

Course Outline: We will cover all the material included in the text, from Chapter 11 to Chapter 15.

## Last Day to Withdraw/Change to Audit: March 28, 2024.

Academic Dishonesty: Student who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act is detected or a failing grade in a course without possibility of withdrawal. Academic dishonesty includes copying the work of someone else, sharing your work with someone else, or using web tools to solve problems on graded assignments. As with all WKU classes, student work may be checked using plagiarism detection software.

**ADA Accommodation Statement:** In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at <u>sarc.connect@wku.edu</u>. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

**Sexual Misconduct/Assault Policy:** Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at <a href="https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf">https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf</a> and Discrimination and Harassment Policy (#0.2040) at

https://wku.edu/policies/hr policies/2040 discrimination harassment policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.