McLennan
C O M M U N I T Y
C O L L E G E
WACO, TEXAS

COURSE SYLLABUS
AND
INSTRUCTOR PLAN

Calculus III
Math 2415. 01

Peter Blaskiewicz

NOTE: This is a 6-week (Summer II session) course.

NOTE: This is an online course, with class meetings using Zoom.

Course Description:

Develops concepts of vectors, vector-valued functions, partial derivatives, Lagrange multipliers, multiple integrals, Jacobians, applications of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem.

Prerequisites:

Math 2414 (Calculus II) with a grade of C or better

Course Notes and Instructor Recommendations:

MyMathLab (*MML*) will be used extensively for posting course notes, assignments, grades, testing, and other communications. Students are expected to check their *MML* and MCC email accounts often.

*** Note about this summer version of the class ***
I will be holding class sessions in Zoom each morning, MTWTh, from 8:00 a.m. till 10:45 a.m. The URL will be posted in this course's Brightspace shell. I strongly encourage you to attend and be an interactive class, for several reasons. For one thing, it will help make the material more immediate and relevant, and you can get your questions resolved right away if you are there 'as it happens.' Also, I will be able to tailor the lessons to your level of understanding if I have an audience to 'read.'
A few of you have let me know that you have to work at that time. The Zoom sessions will be recorded, and links to each video will be posted in Brightspace soon after the class meeting is over (hopefully within 15 minutes or so, but in any case by mid-afternoon). If you miss a class meeting, it is expected that you will watch the video later that day and try your hand at the homework assignment, so that you are ready for the next lesson and don't get behind. (The material does build on itself.)
I will be available for individual Zoom chat sessions / 'office hour' by arrangement, especially if you cannot come to one of the regular class sessions. I request that you first watch the video over the missed class, so that we are not reinventing the wheel. The best way to arrange a Zoom meeting is by emailing me with a suggestion of a time or two that would work for you; if you call me, a voice message would go to my email box anyway. If you are someone whose work schedule seldom or never allows you to attend the Zoom classes, I will expect you to meet with me occasionally in Zoom at other times so that I can know who my students are.

Instructor Information:

Instructor Name: Peter Blaskiewicz
MCC E-mail: pblaskiewicz@mclennan.edu
Office Phone Number: (254) 299-8869
Office Location: MATH 213
Office/Teacher Conference Hours: MTWTh after 2:30 p.m. by arrangement via email
        (Office Zoom: https://mclennan.zoom.us/j/2542998869 by prior email arrangement

Required Text & Materials:

MyMathLab electronic access from the publisher (Pearson) using the textbook listed below (or a code to obtain access if you do not have access linked to this text). The course ID will be given to you in Brightspace, or you may email the instructor after you have registered for the course.

Having a printed copy of the text is completely optional. The textbook to which MyMathLab will be connected (and which will be available electronically inside MyMathLab) is:

Title: Thomas' Calculus - Early Transcendentals (14th Edition)
Author: George Thomas, Maurice Weir, Joel Hass
Edition: Fourteenth (2018)
Publisher: Pearson – AddisonWesley
ISBN: 978-0-13-443902-0 (for optional printed text)

A graphing calculator. The TI-84 or TI-89 or TI N-Spire are the models of choice for this course

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Student Support/Resources:
MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

Minimum Technical Skills:
Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:
In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

 * **Click Here for the Minimum System Requirements to Utilize MCC's D2L Brightspace** (**www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements**)

Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Methods of Teaching and Learning:

Lecture online using Zoom with student participation in example problems; homework submitted online through MyMathLab; tests and a final exam in MyMathLab.

Course Objectives and/or Competencies:

Upon successful completion of this course, students will:
1. Perform calculus operations on vector-valued functions, including derivatives, integrals, curvature, displacement, velocity, acceleration, and torsion.
2. Perform calculus operations on functions of several variables, including partial derivatives, directional derivatives, and multiple integrals.
3. Find extrema and tangent planes.
4. Solve problems using the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes' Theorem.
5. Apply the computational and conceptual principles of calculus to the solutions of real--world problems.

Course Outline or Schedule:
The schedule is subject to change. Should a change become necessary, students will be notified about changes verbally, during class. In the event unforeseen circumstances prevent a class from occurring as scheduled, either make-up lecture material will be posted in Brightspace or the calendar schedule will be adjusted and announced. If something on the school's end or the publisher's end prevents a test from taking place as scheduled, the test window will be moved forward to the next available day.

Date	Section	Topic
July 8 (W)	12.1 – 12.4	Three-space; Vectors; Dot Product; Cross Product
July 9 (Th)	12.5 – 12.6	Lines and Planes in Space; Cylinders, Quadric Surfaces
July 13 (M)	13.1 – 13.2	Test – Chapter 12 Space Curves and their Tangents; Integrals of Vector Functions
July 14 (T)	13.2 – 13.5	Projectile Motion; Arc Length, Curvature, Normal Vectors; Components of Acceleration
July 15 (W)	13.6 – 14.1	Velocity and Acceleration in Polar Coordinates; Functions of Several Variables
July 16 (Th)	14.2 – 14.3	Test – Chapter 13 Limits and Continuity; Partial Derivatives
July 20 (M)	14.4 – 14.5	The Chain Rule; Directional Derivatives, Gradients
July 21 (T)	14.6 – 14.7	Tangent Planes and Differentials; Extreme Values and Saddle Points
July 22 (W)	14.8 – 14.9	Lagrange Multipliers; Taylor's Formula for Two Variables

July 23 (Th)	14.10	Partial Derivatives with Constrained Variables Test – Chapter 14
July 27 (M)	15.1 – 15.4	Double Integrals in Rectangular and Polar Coordinates; Area
July 28 (T)	15.5 – 15.7	Triple Integrals; Cylindrical and Spherical Coordinates; Moments and Mass
July 29 (W)	15.8 – 16.1	Substitutions and Jacobians; Line Integrals
July 30 (Th)	 16.2	Test – Chapter 15 Vector Fields; Work, Circulation, Flux
August 3 (M)	16.3	Path Independence, Potential Functions, Conservative Fields
August 4 (T)	16.4 – 16.5	Green's Theorem; Surface Integrals
August 5 (W)	16.6 – 16.7	Parametrized Surfaces; Stokes' Theorem
August 6 (Th)	16.8	Divergence Theorem
August 10 (M)		Test – Chapter 16 Review for Final Exam
August 11 (T)		Final Exam – cumulative

Course Grading Information:

Your course grade will be based on homework, classwork, chapter tests, and a cumulative exam.
The relative weights of each of these factors is as follows:
Homework (online using MyMathLab)   20%
Class board work and group problems   5%
Tests   (projected 5@ 12% -- if other, the weights will total 60%)   60%
Final Exam   15%

Homework will be assigned and worked online using MyMathLab
(http://www.mymathlab.com/). The deadline for each set of homework will be the scheduled
time of the test over the sections covered by the homework.

We will be covering chapters 12 through 16 of the text. They will have a time limit, and they
must be completed within a specified window (a day or a couple of days). The tests will all be
weighted equally, with all the test weights equal to 60% of the course grade.

NOTE: In order **to take a test** (or the final), each of the **homework** sets covered on the test
must be completed with a grade of **at least 80**%. Otherwise MyMathLab will not allow you to
open the test. Deadlines for tests will not be extended for those who can't access the test due to
unfinished homework.

The final exam will be cumulative. It is scheduled for Tuesday, August 11. Please plan
accordingly. Your grade on the final may also count in place of your one lowest test grade, if that
is to your advantage.

The letter grade received in this course will be based on the customary 90-80-70-60 scale.

Late Work, Attendance, and Make Up Work Policies:

Homework over a unit (chapter or group of chapters) is due the day of the test over those chapters. Since one of the primary purposes of the homework is to prepare you for the test, late homework will be penalized 5% per day of the credit on the problems submitted late. (The penalty will not be applied to any problems in a set that are submitted on time, but only to problems in the set that are submitted late.)

Your attendance will be based on your activity in MyMathLab and participation in Zoom class sessions or 'office meetings' with the instructor. If seven consecutive days elapse with no activity from a student, that student will be dropped from the course for non-attendance. If there is sporadic activity in MyMathLab, and the student falls more than a week behind in assignments, that will also be taken as an indication that the student does not intend to pursue the course to completion, and the student will be dropped for non-attendance. If a situation arises that requires you to be inactive for more than just a day or two, please contact the instructor and discuss the situation, so that you are not otherwise dropped for non-attendance.

If you miss taking one chapter test during its announced window, the grade on the final exam can count to replace that missing test grade. (It will also count as the final.) If you have missed more than one test, only one of those missing grades can be replaced by the final. If you miss the final, the course grade will be calculated with a 0 in its place. (Please do not miss the final!)

Student Behavioral Expectations:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor. Students should demonstrate an attitude that seeks to take full advantage of the education opportunity. For more details of College Conduct Policy, see the Highlander Student Guide

Students are expected to be courteous and respectful of their classmates and of instructors at all times. This includes, but is not limited to, the following:
  - Familiarize yourself with Zoom's features
  - Please do participate in the class meetings. It's fine to have your mic on and ready for interaction, but mute yourself if the dog or children or other background noise would disrupt us.
  - Please use your webcam if you have one. Let me, as well as your fellow classmates, know who is in this course with us. But be mindful of your surroundings when your webcam is on. If necessary or desirable, use a non-distracting virtual background; Zoom provides that option.
  - Dress appropriately for class.
  - Once the lecture gets going, stick to the topic at hand, just as you would for a face-to-face lecture class. Avoid doing other tasks, checking email, being on the phone, or the like.
  - Do not use coarse or foul or offensive language, nor offensive or questionable imagery. Violation of this would be grounds for disciplinary action, including (but not limited to) being dropped from the course.
  - Remember that the session is being recorded.

MCC Academic Integrity Statement:

The Center for Academic Integrity defines academic integrity as "a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behavior that enable academic communities to translate ideals into action." Individual faculty members determine their class policies and behavioral expectations for students. Students who commit violations of academic integrity should expect serious consequences. For more information, **click here for the MCC Academic Integrity Statement** (**www.mclennan.edu/academic-integrity**)

Academic Integrity Statement addendum:

Collaboration on out-of-class assignments is encouraged, but at no time should work belonging to one student be in the possession of another student. Likewise, students are not to engage in cheating in any form during or in preparation for tests or the final exam. All students involved in a cheating incident, whether in providing or receiving assistance, will receive grades of 0 for that assignment, be reported to Student Development, and find their names placed in the MCC database for cheating incidents. If there is a second incident, all students involved will be given grades of F for the course and listed as repeat offenders in the database.

MCC Attendance Policy:

Regular and punctual attendance is expected of all students, and each instructor will maintain a complete record of attendance for the entire length of each course, including online and hybrid courses. Students will be counted absent from class meetings missed, beginning with the first official day of classes. Students, whether present or absent, are responsible for all material presented or assigned for a course and will be held accountable for such materials in the determination of course grades.

Please **click here for the MCC Attendance/Absences Policy** (**www.mclennan.edu/highlander-guide/policies**) for the complete policy.

Accommodations/ADA Statement
Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

* **Click Here for more information about Title IX**
(**www.mclennan.edu/titleix**)
We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcome behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Vice President for Student Success) at 254-299-8645. Individuals also may contact the MCC Police Department at 254-299-8911 or the MCC Student Counseling Center by calling 254-299-8210. The MCC Student Counseling Center is a confidential resource for students.

McLennan's Title IX webpage (http://www.mclennan.edu/titleix/) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence.