

McLennan

C O M M U N I T Y

COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Calculus III

Math 2415.10

Peter Blaskiewicz

NOTE: This is a 16-week course.

NOTE: This is a Blended/Hybrid course.

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals. We are also concerned for your safety. We are working through COVID-19 guidelines to make sure we offer a safe environment for you and our faculty. This will include smaller class sizes to manage social distancing and proper cleaning techniques. You will have the advantage of a physical classroom experience but may also need to work part of the time online as we adjust to limited classroom capacity. This will also allow us the flexibility to move online if so directed by federal, state and/or local COVID 19 guidelines. Faculty and staff are preparing now to ensure that you have the best experience in the midst of these uncertain times.

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 and/or Corequisites:

Math 2414 (Calculus II) with a grade of at least a C

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 *MML* and their MCC email accounts often.

You will need MyMathLab access that lasts at least through the first full week of May. If your access from Calculus II is still active, you might have purchased a plan that extends that long; if not, you would need to get at least another 18 weeks of access once that runs out.

***** Note about this hybrid/blended version of the class *****

Many/most of our class sessions will be held in Zoom. They will be at the announced regular class time each week, MW, from 11:10 a.m. till 1:00 p.m. The URL with the Meeting ID will be posted in this course's Brightspace shell. I strongly encourage you to attend in Zoom 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.'

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.)

In Zoom class meetings, please attend with your microphone and webcam. Your active participation in those meetings is expected, just as they would be in a face-to-face class meeting.

Some of our class meetings will be in the classroom, Science B 110. More information and details about them will be given later in Brightspace and in our Zoom class meetings.

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 outside my regular office hour 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.

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: MW 9:45 – 10:45 a.m.; TTh 1:30 – 2:30 p.m.;
other times by arrangement

Other Instruction Information:

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/>

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.

Calculus III

Math 2415.10

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.

Week (Dates)	Section	Topic
1 (Jan 11-17)	12.1 – 12.4	Three-space; Vectors; Dot Product; Cross Product
2 (Jan 18-24)	12.5 – 12.6	Lines and Planes in Space; Cylinders and Quadric Surfaces
3 (Jan 25-31)	13.1 – 13.2	Test – Chapter 12 Curves in Space and their Tangents; Integrals of Vector Functions; Projectile Motion
4 (Feb 1-7)	13.3 – 13.6	Arc Length, Curvature, Normal Vectors; Components of Acceleration; Velocity and Acceleration in Polar Coordinates
5 (Feb 8-14)	14.1 – 14.2	Test – Chapter 13 Functions of Several Variables; Limits and Continuity
6 (Feb 15-21)	14.3 – 14.6	Partial Derivatives, the Chain Rule, Directional Derivatives, Gradients; Tangent Planes and Differentials
7 (Feb 22-28)	14.7 – 14.9	Extreme Values and Saddlepoints; Lagrange Multipliers; Taylor's Formula for Two Variables
8 (Mar 1-5)	14.10	Partial Derivatives with Constrained Variables Test – Chapter 14
9 (Mar 15-21)	15.1 – 15.5	Double and Triple Integrals in Rectangular and Polar Coordinates; Area
10 (Mar 22-28)	15.6 – 15.8	Moments and Mass; Cylindrical and Spherical Coordinates; Substitutions and Jacobians
11 (Mar 29-Apr 3)	16.1 – 16.2	Test – Chapter 15 Line Integrals; Vector Fields; Work, Circulation, Flux
12 (Apr 5-11)	16.3 – 16.4	Path Independence, Potential Functions, Conservative Fields; Green's Theorem
13 (Apr 12-18)	16.5 – 16.7	Surface Integrals; Parametrized Surfaces
14 (Apr 19-25)	16.6 – 16.8	Stokes' Theorem; Divergence Theorem
15 (Apr 26-May 2)		Test – Chapter 16 Review for Final Exam
16 (May 3)		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 work, group problems, and participation	5%
Tests (projected 5@ 12% -- if other, the weights will total 60%)	60%
Final Exam	15%

You are expected to prepare for each class ahead of time by reviewing the material in the text and, when applicable, viewing or downloading the pdf documents for that class which will be posted in MyMathLab. These pdf files may have audio content, and in order to play them, you should have the most recent version of Adobe Reader installed on your machine. If you do not see an audio control panel when you open the file, you are not using a recent enough version of Adobe Reader. Download the most recent version at <http://get.adobe.com/reader/> (Note: Other programs that open pdf files, such as Preview, will not play the audio content; you'll need to use Adobe Reader.)

Some of our class time will be spent on working problems together. You will be graded on your class participation, whether answer or asking questions, or discussing the topics. When we are meeting in Zoom, you should be ready with your microphone, or type your answers or questions in the chat window. In order to be able to earn a decent score on this portion of your course grade, it is imperative that you participate actively in class. At the end of the semester, if you are simply a name on the class roster to me, you will not have earned any participation credit.

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 - 16 of the text. Generally, there will be a test at the end of each chapter. If any tests are given online, 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**, 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.

If you must miss one test for one of the reasons given in MCC's General Catalog, and you have provided a documented excuse for doing so, the final exam will also count as your make-up test for that chapter. If it is necessary for you to miss more than one test, you should discuss the situation with me. Unexcused absences from tests will not be made up.

The final exam will be cumulative. It is scheduled for Monday, May 3. 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.

Tentative Schedule:

The following dates are tentatively scheduled as our testing dates. The first date is if it is in the classroom, and the second is if online. The Chapter 16 test will be online.

Test 1 (Chapter 12) – Monday, January 25, or Sunday, January 24

Test 2 (Chapter 13) – Monday, February 8, or Sunday, February 7

Test 3 (Chapter 14) – Wednesday, March 3, or Friday, March 5

Test 4 (Chapter 15) – Monday, March 29, or Sunday, March 28

Test 5 (Chapter 16) – Monday, April 26, or Sunday, April 25

Our pace will generally be to cover two sections per class period. Please plan accordingly in preparing for class. In those rare, rare instances when you must be absent, use this as a guideline to know about how much material you would need to make up.

In the event that the school closes for illness or weather or other unscheduled situations, be prepared the next class period to do whatever was planned for the class period that was canceled.

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 2% 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 any scheduled classroom meetings, your activity in MyMathLab and participation in Zoom class sessions, or ‘office hour meetings’ with the instructor. If two consecutive weeks, or else four individual weeks, elapse with no activity from a student, including in MyMathLab, that will be taken as an indication that the student does not intend to pursue the course to completion, and the student will be dropped from the course for non-attendance. If a situation arises that requires you to be inactive for more than just a few days, 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 or Conduct Policy:

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.

Whether we meet in Zoom or in a classroom:

- 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. 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.

For any class meetings on campus, the following conduct is also required:

- Face coverings **must** be worn at all times in the classroom and in all buildings (from the time you leave your vehicle till you get back in it). Both your mouth and your nose must be covered or shielded (mask, bandana, face shield). If you come without a mask or approved face covering, you will be required to leave right away.
- If you are at all sick, or think you might be, **stay home**. (The lessons will be recorded and posted in Brightspace; catch up there.) If you feel like you are coming down with something while on campus, please leave right away if you can safely do so, or else go to one of the designated quarantine rooms on campus until arrangements can be to get you home.

* [Click Here for the MCC Academic Integrity Statement](http://www.mclennan.edu/academic-integrity)
(www.mclennan.edu/academic-integrity)

The link above will provide you with information about academic integrity, dishonesty, and cheating.

Collaboration on out-of-class homework or projects 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.

*** [Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)**

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

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.

** You will need to access each link separately through your Web browser (for example: Mozilla Firefox, Chrome, Microsoft Edge or Safari) to print each link's information.*

McLennan

C O M M U N I T Y

COLLEGE

ACADEMIC RESOURCES/POLICIES

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 or want to explore strategies for balancing life and school, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

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](https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html)
(<https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html>)

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.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with her/his students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails.

Forwarding Emails:

You may forward the emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may become lost or placed in junk or spam filters.

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](http://www.mclennan.edu/titleix)
(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 unwelcomed 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 (Chief of Staff for Equity & Inclusion/Title IX) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting the following website: <http://www.lighthouse-services.com/mclennan/>.

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.

** You will need to access each link separately through your web browser (for example Mozilla Firefox, Chrome, Microsoft Edge, or Safari) to print each link's information.*