

Syllabus
Spring Semester, 2020
MATH 2654, Calculus III
MW, 9:30 AM–10:45 AM
F, 9:55 AM–10:45 AM
Boyd Building Room 305

Text: *Calculus Early Transcendentals*, Seventh Edition, by James Stewart, Brooks/Cole Cengage Learning, 2012.

Instructor: Dr. Mark Faucette

Office: Boyd Building 323

Phone: My office phone number is 678-839-4133. Call and leave a message on my answering machine. I screen my phone calls, so make sure you leave a message.

E-Mail: My e-mail address is faucette@westga.edu.

The Web: My web page is at URL <http://www.westga.edu/~faucette/>. The full course syllabus is located on my web site and can be downloaded as a pdf file. It is the student's responsibility to download and/or to print the syllabus and to follow it.

Office Hours: My office hours are

- MW: 8:00 AM–9:30 AM
- F: 8:00 AM–9:55 AM

Other times are available by appointment. I do not provide individual instruction during office hours. I do not hold office hours during final exam week.

Required Equipment: The following are required for this course:

- A graphing calculator is required for this course. Graphing calculators equivalent to the TI-83, 84, 85, and 86 will be allowed on the tests and the final examination, as will scientific calculators. The TI-89 and other equivalent calculators will **not** be allowed. You must have your calculator with you every class day.
- A MyMathLab software license is required for this course. You may purchase the software license online. (See the section on homework below.) **You must purchase the software before midnight on Monday, January 20, or you will be unable to do so.**
- A registered i>Clicker 2 remote is required for this course. You may purchase an i>Clicker 2 remote at the bookstore and register it online. (See the section on attendance below.)

Common Language for Course Syllabi: All Students Please Note!

For important policy information, i.e., the UWG Honor Code, Email, and Credit Hour policies, as well as information on Academic Support and Online Courses, please review the information found in the Common Language for Course Syllabi documentation at

<http://www.westga.edu/UWGSyllabusPolicies/>.

It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Grading Policy

Participation (100 points) Participation will count one hundred points.

Homework (150 points) Homework will be completed online using MyMathLab. Homework will be scaled to count one hundred fifty points.

Quizzes (100 points) Quizzes will be completed online using MyMathLab most every Friday. Quizzes will be scaled to count one hundred points.

Tests (400 points) There will be four tests, each counting one hundred points.

Final Examination (250 points) There will be one comprehensive final examination counting two hundred fifty points.

At the end of the semester, the following grading scale will be used:

- 1000 points is the total number of points possible.
- A total of 900–1000 points earns an A.
- A total of 800–899 points earns a B.
- A total of 700–799 points earns a C.
- A total of 600–699 points earns a D.
- A total below 600 points earns an F.

Expectations

Attendance and Classroom Decorum: You are expected to attend class every class period. Class time is at a premium, so it is imperative that it be used wisely. You are not allowed to come to class late or to leave early. You may not converse with other students during class time without my permission. I will allow some time for questions at appropriate points during the lecture, but you may not interrupt the lecture with questions. If you disrupt the educational atmosphere of the class, I will ask you to leave. If you miss class for any reason, it is your responsibility to get the lecture notes from a classmate, read the text, and do the homework. Attendance will be taken at the beginning of class and attendance will be taken at the end of class. **Any student possessing more than one i>Clicker 2 during any class period will receive a grade of zero participation points for the entire semester for the owners of both i>Clickers.**

Technology: With the exception of the i>Clicker 2 and calculator required above, all technology is banned from the classroom. This includes, but is not limited to, all iPads, iPods, cell phones, and laptop computers. You may not take pictures of notes on the board. You must write down your notes. The only exception to this policy is that you may use an electronic pen and a notebook computer (e.g. an iPad) in order to take notes in the course, provided you use it for nothing else. Otherwise, if you are found to have an item of technology within view during class, you will be asked to leave class.

Office Hour Regulations: In order for me to utilize my time more wisely, I do not provide assistance with homework during office hours. If you need assistance with your homework, the Mathematics Tutoring Center and the Center for Academic Success are your resources. I am available to answer general questions about the material or to address issues that are student specific.

Course Content: The course will cover the topics listed on the attached lecture schedule.

Reading Assignments: You are responsible for reading and understanding the text before it is covered in class through lecture. The lectures during class time will supplement, not replace, the reading of the text. Since class time is limited, only a limited number of examples can be given in class. You can find a large number of examples worked completely in the text. If you are diligent, you will find these examples a great help in completing the homework assignments and earning a satisfactory grade at the end of the semester.

Lecture: The primary method of classroom instruction will be by lecture during class time. The class time will be divided between lectures on new material, working problems at the board, and assessment. It is extremely important that you attend class regularly. You are responsible for all the material presented in the lectures, regardless of attendance. If needed, students can obtain supplementary assistance from the Mathematics Tutoring Center.

Extra Credit: There is no extra credit for any reason. All points must be earned on the participation, homework, quizzes, tests, and the final examination. I do not “curve” scores. That, too, is extra credit. You get the points you earn.

Make-Up Work: There are no make-up grades for any reason. Students having an absence for any reason on the day homework or a quiz is due must complete that assignment on time online. Students having an unexcused absence on the day of a test will receive a grade of zero for that test. Students having an excused absence on the day of a test will have their test average entered for the missed grade. This may only be done once. Absences must be excused *before* they occur except in extraordinary cases, such as active military duty, jury duty, or hospitalization. *Being sick, short of being hospitalized, is not an excuse.* If you anticipate being absent from class for a religious holiday, it is your responsibility to notify me *in advance*.

Homework: Homework assignments will be completed using MyMathLab. To enroll to use MyMathLab, you will need three things:

- *A Valid E-Mail Address:* Your instructor requires you to use your myUWG e-mail address here.
- *A Course ID:* For this course, the course ID is **faucette54785**.
- *A Student Access Code:* You may purchase a student access code through the web site with a valid credit card.

Now go to the URL *http://www.mymathlab.com* and follow the directions.

There are no extensions on the due dates for homework for any reason.

Quizzes: Quizzes will be completed online using MyMathLab most every Friday. Quizzes will be scaled to count one hundred points.

There are no extensions on the due dates for quizzes for any reason.

Tests: There will be four tests administered on Friday, January 31; Wednesday, February 26; Friday, April 3; and Monday, April 27. You will need your calculator for each test.

Midterm: THE LAST DAY TO WITHDRAW WITH A W IS FRIDAY, FEBRUARY 28.

Final Examination: There will be a comprehensive final examination administered on Wednesday, April 29, from 8:00 AM to 10:00 AM in room 305 in the Boyd Building. You will need your calculator for the final examination.

MATH 2654 Lecture Schedule

Monday, January 6	Three Dimensional Coordinate Systems
Wednesday, January 8	Vectors
Friday, January 10	The Dot Product
Monday, January 13	The Cross Product
Wednesday, January 15	Lines and Planes in Space
Friday, January 17	Lines and Planes in Space
Monday, January 20	MLK Holiday
Wednesday, January 22	Curves In Space and Their Tangents
Friday, January 24	Integrals of Vector Functions: Projectile Motion
Monday, January 27	Arc Length In Space
Wednesday, January 29	Curvature and Normal Vectors of a Curve
Friday, January 31	Test 1
Monday, February 3	Curvature and Normal Vectors of a Curve
Wednesday, February 5	Tangential and Normal Components of Acceleration
Friday, February 7	Tangential and Normal Components of Acceleration
Monday, February 10	Functions of Several Variables
Wednesday, February 12	Limits and Continuity in Higher Dimensions
Friday, February 14	Partial Derivatives
Monday, February 17	The Chain Rule
Wednesday, February 19	The Chain Rule and Directional Derivative
Friday, February 21	Directional Derivatives and the Gradient Vector
Monday, February 24	Tangent Planes and Differentials
Wednesday, February 26	Test 2
Friday, February 28	Extreme Values and Saddle Points
Monday, March 2	Lagrange Multipliers
Wednesday, March 4	Double and Iterated Integrals over Rectangles
Friday, March 6	Double Integrals over General Regions
Monday, March 9	Area by Double Integration
Wednesday, March 11	Double Integrals in Polar Form
Friday, March 13	Triple Integrals in Rectangular Coordinates

Monday, March 16	Spring Break
Wednesday, March 18	Spring Break
Friday, March 20	Spring Break
Monday, March 23	Applications
Wednesday, March 25	Triple Integrals In Cylindrical Coordinates and Spherical Coordinates
Friday, March 27	Substitutions in Multiple Integrals
Monday, March 30	Line Integrals of Scalar Functions
Wednesday, April 1	Vector Fields and Line Integrals: Work, Circulation, and Flux
Friday, April 3	Test 3
Monday, April 6	Path Independence, Conservative Fields, and Potential Functions
Wednesday, April 8	Green's Theorem in the Plane
Friday, April 10	Green's Theorem in the Plane
Monday, April 13	Surfaces and Area
Wednesday, April 15	Surface Integrals
Friday, April 17	Stokes' Theorem
Monday, April 20	Stokes' Theorem
Wednesday, April 22	The Divergence Theorem
Friday, April 24	The Divergence Theorem
Monday, April 27	Test 4

Academic Orientation for Freshman Lecture Courses¹

The fundamental problem is that most of our current high school graduates don't know how to *learn* or even what it means to learn (a fortiori to understand) something. In effect, they graduate high school feeling that learning must come down to them from their teachers. That may be suitable for the goals of high school, but it unacceptable at the university level. *That the students must also learn on their own, outside the classroom, is the main feature that distinguishes college from high school.*

My contention is that it is possible to get college freshmen to learn calculus fairly well, without resorting to utopian tricks such as enforced group projects. All we have to do is get the student to accept that learning is something that will take place mostly outside of class; that is, *just insist that they grasp the underlying premise of college education.*

1. **You are no longer in high school.** The great majority of you, not having done so already, will have to discard high school notions of teaching and learning and replace them by university-level notions. This may be difficult, but it must happen sooner or later, so sooner is better. Our goal is more than just getting you to reproduce what was told to you in the classroom.
2. Expect to have material covered at *two to three* times the pace of high school. Above that, we aim for greater command of the material, especially the ability to apply what you have learned to new situations (when relevant).
3. Lecture time is at a premium, so it must be used efficiently. You cannot be “taught” everything in the classroom. **It is *your* responsibility to learn the material.** Most of this learning must take place *outside* the classroom. You should be willing to put in two hours outside the classroom for each hour of class.
4. The instructor's job is primarily to provide a framework, with *some* particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is not to “program” you with isolated facts and problem types nor to monitor your progress.
5. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in the lecture. The textbook is not a novel, so the reading must often be slow-going and careful. However, there is the clear advantage that you can read it at your own pace. Use pencil and paper to work through the material and to fill in omitted steps.
6. As for *when* you engage the textbook, you have the following dichotomy:
 - (a) [*recommended for most students*] Read for the first time the appropriate section(s) of the book *before* the material is presented in lecture. That is, come prepared for class. Then the faster-paced college-style lecture will make more sense.
 - (b) If you haven't looked at the book beforehand, try to pick up what you can from the lecture (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying from the book outside of class.

¹Steven Zucker, *Notices of the American Mathematical Society*, vol. 43, no. 8, p. 865 (August 1996)

Academic Honesty Prohibited Conduct²

The penalty for violating this policy is failure in the course.

General standard of conduct: No student shall knowingly perform, attempt to perform, or assist another in performing any act of dishonesty on academic work to be submitted for academic credit or advancement. The term “knowingly,” as used in the preceding sentence, means that the student knows that the academic work involved will be submitted for academic advancement. “Knowingly” does not mean that the student must have known that the particular act was a violation of the University’s academic honesty policy. A student does not have to intend to violate the honesty policy to be found in violation. For example, plagiarism, intended or unintended, is a violation of this policy.

Examples of Academic Dishonesty: The following acts by a student are examples of academically dishonest behavior:

- I. Plagiarism - Submission for academic advancement the words, ideas, opinions or theories of another that are not common knowledge, without appropriate attribution to that other person. Plagiarism includes, but is not limited to, the following acts when performed without appropriate attribution:
 - A. Directly quoting all or part of another person’s written or spoken words without quotation marks, as appropriate to the discipline;
 - B. Paraphrasing all or part of another person’s written or spoken words without notes or documentation within the body of the work;
 - C. Presenting an idea, theory or formula originated by another person as the original work of the person submitting that work;
 - D. Repeating information, such as statistics or demographics, which is not common knowledge and which was originally compiled by another person;
 - E. Purchasing (or receiving in any other manner) a term paper or other assignment that is the work of another person and submitting that term paper or other assignment as the student’s own work. E
- II. Unauthorized assistance - Giving or receiving assistance in connection with any examination or other academic work that has not been authorized by a faculty member. During examinations, quizzes, lab work, and similar activity, students are to assume that any assistance (such as books, notes, calculators, and conversations with others) is unauthorized unless it has been specifically authorized by a faculty member. Examples of prohibited behavior include, but are not limited to, the following when not authorized:
 - A. Copying, or allowing another to copy, answers to an examination;
 - B. Transmitting or receiving, during an examination, information that is within the scope of the material to be covered by that examination (including transmission orally, in writing, by sign, electronic signal, or other manner);
 - C. Giving or receiving answers to an examination scheduled for a later time;
 - D. Completing for another, or allowing another to complete for you, all or part of an assignment (such as a paper, exercise, homework assignment, presentation, report, computer application, laboratory experiment, or computation);

²The content of this page is taken from the document *Academic Honesty Policy (A Culture of Honesty)*, Section 5, The University of Georgia.

- E. Submitting a group assignment, or allowing that assignment to be submitted, representing that the project is the work of all of the members of the group when less than all of the group members assisted substantially in its preparation;
 - F. Unauthorized use of a programmable calculator or other electronic device.
- III. Lying/Tampering/Bribery - Bribery or giving any false information in connection with the performance of any academic work or in connection with any proceeding under this policy. This includes, but is not limited to:
- A. Giving false reasons (in advance or after the fact) for failure to complete academic work. This includes, for example, giving false excuses to the Faculty Member or to any University official for failure to attend an exam or to complete academic work;
 - B. Falsifying the results of any laboratory or experimental work or fabricating any data or information;
 - C. Altering any academic work after it has been submitted, unless such alterations are part of an assignment (such as a request of an instructor to revise the academic work);
 - D. Altering grade, lab, or attendance records. This includes, for example, the forgery of University forms for registration in or withdrawal from a course;
 - E. Damaging computer equipment (including disks) or laboratory equipment in order to alter or prevent the evaluation of academic work, unauthorized use of another's computer password, disrupting the content or accessibility of an Internet site, or impersonating another to obtain computer resources;
 - F. Giving false information or testimony in connection with any investigation or hearing under this policy;
 - G. Submitting for academic advancement an item of academic work that has previously been submitted (even when submitted previously by that student) for academic advancement, unless done pursuant to authorization from the Faculty Member supervising the work or containing fair attribution to the original work.
- IV. Theft - Stealing, taking or procuring in any other unauthorized manner (such as by physical removal from a professor's office or unauthorized inspection of computerized material) information related to any academic work (such as exams, grade records, forms used in grading, books, papers, computer equipment and data, and laboratory materials and data).
- V. Other - Failure by a student to comply with a duty imposed under this policy. However, no penalty is imposed under this policy for failure to report an act of academic dishonesty by another or failure to testify in an academic honesty proceeding concerning another. Any behavior that constitutes academic dishonesty is prohibited even if it is not specifically listed in the above list of examples.

Information Sheet
(Please Print)

Name: _____ Student ID#: _____

Local mailing address: _____ E-mail: _____

Phone: _____ Year at UWG: _____

Math Background (List high school courses and any UWG courses.)

What are you taking this semester?

What is your major/proposed major?

When is your birthday?

Where are you from?