

## **Course Information**

Title: Multivariable Calculus and Linear Algebra

Instructor: Dr. Schmidt

Location: A30 or via [Zoom](#) (Meeting ID: 826 9016 7041)

Meets:

Period 1: MTWR 7:10-7:55 AM, F 7:10-7:50 AM

Period 7: MTWR 1-1:45 PM, F 1:10-1:50 PM

Period 8: MTWR 1:50-2:35 PM, F 1:55-2:35 PM

About Multivariable Calculus: Focuses on extending the concepts of function, limit, continuity, derivative, integral and vector from the plane to the three dimensional space. Covers topics including vector functions, multivariate functions, partial derivatives, multiple integrals and an introduction to vector calculus. Features instruction for mathematical, physical and engineering science programs.

About Linear Algebra: Covers matrices, vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigenvalues, and eigenvectors. Features instruction for mathematical, physical and engineering science programs.

## **Textbooks**

Calculus Early Transcendentals, 7th edition, by Stewart - linked [here](#)

An optional secondary resource for Calculus is linked into each homework assignment. Please note that the chapter/section numbers are not all the same as those referenced in our primary resources.

A First Course in Linear Algebra by Kuttler - linked [here](#)

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### **Required Materials**

- A graphing calculator (which we will rarely use).
- A wifi capable device for assignments.
- A folder or binder in which to keep all course materials.

### **Schedule**

Please refer to the Canvas Calendar for the course schedule. It is a tentative schedule and is subject to changes. All changes will be announced in class and updated in the Canvas Calendar.

### **Academic Support**

I am available 2:35-3pm Monday through Friday by appointment scheduled at least 24 hours in advance. We can meet via Zoom or in my classroom. If you need help, it your responsibility to ask for it. In my role as a teacher, I won't know if you're having difficulty with an assignment until after its due date unless you let me know before then.

### **Grading**

Homework (15%): Homework assignments are embedded in Canvas via the OER MyOpenMath. You do not need or use a MyOpenMath account to access them because they are embedded within the course. They are due nearly every Sunday evening - the same day every week to help you remember! You are expected to write out your solutions and keep them neatly organized in a folder/binder/notebook that you bring to class each day. I will occasionally check this notebook for completion. Writing out your solutions is important practice that should help you achieve a level of mastery to perform well on quizzes and tests. You get 100 attempts on all homework problems. Please note the due dates in the Canvas Calendar.

Quizzes (25%): Quizzes are embedded in Canvas via the OER MyOpenMath. You do not need or use a MyOpenMath account to access them because they are embedded within the course. Since they are not created within Canvas, you will not find them listed under "Quizzes" (an unfortunate Canvas technicality). Instead they are linked in Modules. You are expected to write out and turn in your solutions; they may occasionally be graded. You get one attempt on a quiz and one attempt per problem. **Quizzes are taken in class, are timed, and must be completed all at once.** Please note the dates in the Canvas Calendar.

Tests (60%): There are three tests in quarters 1, 2, and 3, There may be two or three tests in quarter 4 as time allows (it is a very short quarter). The content of each test is included in the name of the assignment. Each tests covers the same content as the quiz taken immediately prior. It is in your best interest to approach these quizzes as practice tests to prepare well for the subsequent test. If you score 90% or higher on a quiz, you do not have to take the subsequent

test because you have achieved the intended level of proficiency. In this case, your test score will be the same as your quiz score. You can find all tests and their dates in the Canvas Calendar.

Click [here](#) for the grade change appeals process.

### **Late Work**

**Homework & Quizzes:** These assignments are not excepted late under any circumstances except the following:

- extreme circumstances with supporting documentation
- use of an OOPS token

**Tests:** If you miss a test due to an excused and documented absence, you may take it late without penalty. If you miss a test due to an unexcused absence, you may take it late with a 20% deduction.

### **Missed/Canceled Class**

If you miss a class for any reason, you are responsible for printing the class handouts and watching the class Zoom recordings posted in Modules in Canvas.

If a class is canceled for any reason, you may be assigned virtual lessons (e.g., video lectures, reading assignments, etc.).

### **Communication Policy**

You must check your Canvas Inbox, Governor's School email, and Canvas Announcements regularly. This is especially important as it relates to the Missed/Canceled Class policy above. I will communicate any changes to the schedule and send reminders about assignments.

I am eager to help you! I'm fortunate to have a job that I love and am passionate about, so please let me do that by letting me know when you need help. I check my email at least once a day, more as my schedule permits. Please understand and respect that as eager as I am to help you, I have to set boundaries. I do not check my email much after 3pm on weekdays and after 8am on weekends. If you wait until then to ask for help, I will not be available.

### **Classroom Expectations**

You are expected to adhere to the following rules.

1. Cell phones are put away unless asked to use them.
2. You do not interrupt others while they're speaking.
3. Be attentive to others while they're speaking.
4. Be supportive of your classmates.
5. Laptops or tablets are only used for class-related activities.

## **Dual Enrollment**

You are eligible to receive dual enrollment for MTH 265 Calc 3 in Fall 2022 and MTH 266 Linear Algebra in Spring 2023 from VPCC. If you want to decline dual enrollment, it must be declared in writing signed by a guardian.

The decision to dual-enroll in a course requires careful consideration. You have options, as you can see from the DE module on Faculty Advising Canvas course. You may wish to contact your top choice colleges to ask what the impact of taking a dual-enrollment course might be for your goals, particularly if you do not perform to your expectations in the course. Please be aware that you are generating a permanent college transcript with all the courses for which you are dual-enrolled. You can also use the dual-enrollment student guide from [Transfer Virginia](#) to help you determine the potential impact.

If you choose to dual-enroll, you must monitor your course grade. If you find you are not earning grades you want to have on your permanent college transcript, you may consider dropping the dual-enrollment portion prior to the Add/Drop date for the term of the course, or to withdraw from the dual-enrollment portion prior to the Withdrawal date. If you choose to withdraw from dual enrollment for the class, you will still earn high school credit and can plan to be well-prepared for the class in college. Dropping will have no record on your transcript, while withdrawal will leave a note on your college transcript indicating you withdrew, but no grade will be recorded on your college transcript. You can request a decline or withdrawal form from me or from Mrs. Yee.

No matter what you choose to do, I will respect your wishes. I want to work with you to support your learning, but I cannot learn the information for you; you will have to invest effort in the course in order to succeed. This may require you to learn new learning strategies that you haven't used in the past. I will do my utmost to support your personal learning in the class and encourage you to pursue your goals.

While the Governor's School for Science and Technology (GSST) will do all in its power to secure dual enrollment (DE) status for its courses, dual enrolled course credits are not guaranteed. Since the Virginia Community College System (VCCS) and Virginia Peninsula Community College (VPCC) set the criteria for DE and must approve each course and instructor, unavoidable circumstances that are not within the control of GSST may change the DE eligibility of any given GSST course. Alternative pathways for meeting specialty program requirements (E.g. concurrent Associates Degree) should be discussed in advance with the home high school counselor.

## **MyOpenMath**

This is an open (free) educational resource that Dr. Schmidt uses for many assignments. The content is created by instructors around the world. Since it does not go through a formal publishing process, there are occasionally errors. Please let Dr. Schmidt know of any

assignments containing errors within a week of their due dates. The errors will be corrected and so will your resulting scores.

### **Honor Code**

You are expected to work out all problems without the prohibited resources described below. You are allowed to collaborate with your peers or guardians on homework only, no other assignments. You may reference the textbook and your class notes on homework only, no other assignments.

What is collaboration? You're allowed to discuss problem-solving strategies, but you must write your solutions on your own. Being told or rewriting step-by-step work is considered cheating.

In the particular case that a quiz or test is delivered online, you should have only one window and only one tab open with the assessment on it. You are not allowed to view any other windows, tabs, websites, etc. You are not allowed any other resources other than those I handout for the assessment, including scratch paper and work paper.

### **Prohibited Resources**

These resources tend to give a false sense of "learning" because you may feel like you understand the problem solving process. This may be, but there's a difference between understanding a solution and being able to come up with it entirely on your own. These resources remove the critical thinking and creative process of problem solving. Using them on homework assignments is highly likely to result in high homework scores and low quiz and test scores. Unless otherwise instructed you should never use the following resources and any other such resources: Wolfram Alpha, Chegg, MathWay, PhotoMath, desmos, calculators, etc. If you're unsure if/when a resource is prohibited, ask! I check my email at least once a day.

#### **Calculator exceptions:**

You should never use a calculator except:

- For a few specific topics - announced in class.
- When working with more than two decimal digit numbers.
- When working with more than three digit whole numbers.

Since the numbers in your MyOpenMath homeworks are all randomly generated, you will occasionally encounter very large or very precise numbers as described above. You may use a calculator for calculations involving such numbers. You should never use a calculator on quizzes or tests; they will be written such that very large or precise numbers are not necessary. You should not use a calculator for fractions! If you've forgotten how to perform calculations involving fractions, let me know, and I'll provide supplemental resources.

### **Academic Dishonesty**

Penalties for honor code violations vary based on the assignment. Deductions vary from 20% to 100%.

### **Accommodations**

If you have an IEP or 504, please let me know privately and immediately. I will make sure your homeschool counselor has sent the documentation to GSST. Accommodations are only provided if GSST has that documentation, and they are not provided retroactively.

### **COVID policies**

In case of COVID-related meeting restrictions, we will **not** miss a class. Monitor your Canvas Inbox, Governor's School email, and Canvas Announcements for instructions.