

# Math 163: Calculus III in Fall 2022

10-10:50am in 17-101 M – F (Item #26676)

11-11:50am in 17-101 M – F (Item #26680)

## Syllabus

### Instructor Information

- i. Instructor: Dusty Wilson
- ii. Office: 26-306
- iii. Phone: 206-592-3338
- iv. Office Hours:
  - Monday: 8-8:50 am (my office, 26-306)
  - Tuesday: 9-9:50 am (MRC) and lunch 12:00-12:50 (Table in Student Union)
  - Thursday: 9-9:50 am (MRC) and lunch 12:00-12:50 (Table in Student Union)
  - Friday 8-8:50 (my office, 26-306)
- v. home page: <http://people.highline.edu/dwilson>
- vi. e-mail: [dwilson@highline.edu](mailto:dwilson@highline.edu)

### Course Description

Third quarter of the Calculus sequence. Topics include calculus of parametric equations, lines, planes and vectors in  $R^3$ , the calculus of vector-valued functions power series, and Taylor expansions, partial derivatives, gradient vector and introduction to double integrals.

### Student Learning Outcomes

- i. Compute equations of lines and planes.
- ii. Solve applications of space curves, including arc length, curvature, and the tangential and normal components of acceleration.
- iii. Calculate power series expansions and approximate functions using Taylor polynomials.
- iv. Determine domain and level curves for functions of several variables.
- v. Calculate gradients, partial, and directional derivatives for functions of several variables and interpret their meaning.
- vi. Construct and evaluate double integrals in rectangular coordinates.
- vii. Compute numerical approximations using linearization of functions of several variables.

### Text

*Calculus, Early Transcendentals (8<sup>th</sup> ed.)*, by James Stewart.

### Prerequisite

Math 152 with a minimum grade of 2.0.

### Calculators

A graphing calculator is required for this course.

- i. The TI-84 calculator is recommended. The use of symbolic calculators may not be allowed during assessments/exams. Furthermore, the use of all calculators may be prohibited during some assessments/exams (forewarning will be given).
- ii. Very limited class time will be spent explaining the use of calculators.
- iii. Calculators may be rented from the Math Department through the Library.

## Homework

The format and grading criteria for homework is as follows.

- i. **Enhanced Web Assign:** Graded homework will be administered online thru EWA. The website is: <https://www.webassign.net/wa-auth/login>
- ii. **EWA Class Key:** highline.cc.wa 9406 5507
- iii. **Cost:** There is a free two-week trial period. You will need to purchase access to the homework platform when the trial period ends to have access to the ebook and Webassign for the whole quarter. Prices can vary widely depending on where you purchase from and which format and plan you choose. Cengage provides single term course material access for about \$50 if you purchase directly within the software platform when you create/sign into your Cengage account. If you purchase a Webassign/eBook access code somewhere else, the system will prompt you to pay within the software or to input a code. Cengage also offered multi-term Cengage Unlimited accounts. This option can be very cost effective if you have multiple courses using Cengage products. Cengage Unlimited also gives you access to all of their ebooks available plus a few other perks.
- iv. **Submissions:** You may make up to five submissions on most problems. However some questions are multiple guess. In this case, you are generally only allowed 1 or 2 attempts.
- v. **Bonus:** If you complete homework exercises 24 hours in advance of the deadline, you will earn a 3% bonus on the problem.
- vi. **Extensions:** You may request a 24-hour extension on the homework *for the week after the original due date*. There is a 20% penalty on each problem completed using the extension.

## Review Assignments

- i. There is (at least) one review assignment. This will be graded and treated as a homework assignment.

## Gradescope

- i. Written work will be submitted (and returned) through a free program called Gradescope. It is similar to uploading into Canvas, but is designed for math/science classes and so easier for me to administer.

## Slack Assignments

- i. There are (roughly) weekly assignments to complete in Slack. Slack is sort of like Discord or GroupMe, but is often used in professional settings which is why I've chosen to use it. Other classes use discussion boards, we are using Slack.
- ii. You will be posting homework questions/responses. This is also where I will make announcements and can best be asked questions outside of class.
- iii. Assignments will be submitted in Gradescope. One score will be dropped.

## Discussion Seminars

- i. Half the credit in this category will be for preparation for the seminar (measured through submitting notes prior to class in Gradescope) and the other half for attendance (this portion cannot be made up because it involves discussion).
- ii. One assignment score will be dropped.

## Assessments

There will be weekly assessments:

- i. The assessments will be cumulative, but will emphasize recent material.

- ii. The length/value of the assessments will vary from 15 minutes up until the full time period. Advance notice will be given.
- iii. Your lowest assessment score will be dropped.
- iv. All assessments must be taken during the scheduled class time. No make-ups.
- v. Spoken and written communication as well as sharing of calculators during exams is prohibited.

**Working remotely and illnesses**

It is a brave new world where we face new challenges such as Covid-19 while also having many new tools and skills in the areas of teaching and learning:

- i. Attending class in person is a good thing.
- ii. Lessons will generally be available online:
  - For when you are sick and unable to attend class 😞.
  - For when you want to review a lesson 😊.
  - For when you can't (or don't want to) make it to class 😊.
  - For when face-to-face class is cancelled because I am sick or otherwise unable to teach 😞.
- iii. Assessments, exams, and discussion seminars must be attended face-to-face. Plan accordingly. These cannot be completed remotely.<sup>1</sup>
- iv. Because assessments must be completed in person, one score is dropped. Special circumstances can be addressed on a case-by-case basis.

**Final Exam**

A comprehensive final exam will be held in the regular class meeting room. See the quarterly class schedule for dates and times. The final exam is mandatory and a grade of 0.0 may be assigned at the instructor's discretion to those who fail to take the final exam.

**Grading**

Homework: 16%, Slack Assignments: 2%, Discussion Seminars: 2%, Assessments: 50%, and Final Exam: 30%. GPA's will be given according to:

95-100%	4.0	%%	GPA	%%%	GPA	%%	GPA	%%	GPA
93-4%	3.9	81%	3.1	73%	2.3	65%	1.5	57%	0.7
91-2%	3.8	80%	3.0	72%	2.2	64%	1.4	0-56%	0.0
89-90%	3.7	79%	2.9	71%	2.1	63%	1.3		
87-8%	3.6	78%	2.8	70%	2.0	62%	1.2		
85-6%	3.5	77%	2.7	69%	1.9	61%	1.1		
84%	3.4	76%	2.6	68%	1.8	60%	1.0		
83%	3.3	75%	2.5	67%	1.7	59%	0.9		
82%	3.2	74%	2.4	66%	1.6	58%	0.8		

**Policies and Notes**

- i. **Attendance:** You are responsible for all material covered in class including all announced changes to the schedule and assigned course work. (If you miss class, *you* are still responsible for everything in class).
- ii. **Devices:** The use of non-human smart gadgets in class is discouraged (except when requested). Smart non-human devices are banned during assessments and tests.
- iii. **Math Resource Center:** Cost-free mathematics tutoring is available at the MRC. The MRC is located on the sixth floor of the library (Bldg 25).

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<sup>1</sup> Perhaps it goes without saying, that remote options would be available should on campus classes be cancelled. Similarly, please talk to me if you have a prolonged illness (or the like).

- iv. **Faculty Advising:** Highline College instructors are a wonderful resource for students at any stage of the academic process. Many Highline instructors have career experience, are knowledgeable about campus resources, and can assist students in reaching their educational goals through degree planning. If you have an advising question, feel free to approach your instructor. If your instructor cannot answer your question, s/he will help you find someone who can.
- v. **Honors:** Highline College offers opportunities for students to participate in an Honors Program tailored to their pathways. Students who fulfill all Honors Program requirements may become eligible for a scholarship during their final quarter and receive recognition at Highline's commencement ceremony.  
If you are interested in the Honors Program, I invite you to pursue an honors project in this class. Please approach me within the first three weeks of the quarter, and we will work together to develop a plan for completing an advanced academic or professional project. After completing the project and earning a 3.5 GPA in this course, an "honors" notation will appear on your official Highline transcript.
- vi. **Academic Dishonesty:** Cheating, plagiarism, and other forms of academic dishonesty are unacceptable at Highline College and may result in lower grades and/or disciplinary action. It is both your right and responsibility to be familiar with the document entitled: Student Rights and Responsibilities code WAC 132I-1210 adopted by the Board of Trustees of Community College District 9 on December 13, 2007. This is available in the counseling center.
- vii. **Access Services:** Your experience in this class is important to me. If you have already established accommodations with Access Services, please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course. If you have not yet established services through Access Services but have a temporary health condition or permanent disability that requires accommodations (conditions include but are not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact Access Services at 206-592-3857, access@highline.edu or access.highline.edu. Access Services is located on the 5th floor of the Library, Building 25, Room 531.
- viii. **Emergency Procedures:** In the event of an emergency, follow your instructor's directions. If you are told to evacuate the building, take your valuables because you may not be allowed to re-enter. Do not leave campus until your instructor or another campus official tells you to do so. If you may need assistance evacuating, notify your instructor today. To prepare yourself for an emergency, review the evacuation map on the last page of the emergency placard in your classroom and subscribe to HC Alert at <https://hctextalerts.highline.edu/>.
- ix. **Final Exams:** Your completed final exam will not be returned to you. It belongs to the instructor. However, you may (and should) review your final exam by stopping by the instructor's office the next quarter.
- x. **School Policies:**
  - i. The Student Rights and Responsibilities Code: A legal document that describes college expectations, students' rights, and outlines the process for resolving disciplinary matters and Code violations. <http://studentservices.highline.edu/srr.php>
  - ii. The College Catalog: Lots of fine print about grades, deadlines, and resources can be found in the catalog at: <http://catalog.highline.edu/>
- x. **Important Dates (dates should be verified online):**
  - i. September 30<sup>th</sup>: Last Day for 100% Tuition Refund
  - ii. October 7<sup>th</sup>: The last day to drop without incurring a "W"
  - iii. November 3<sup>rd</sup>: The beginning of registration for Winter Quarter
  - iv. November 18<sup>th</sup>: The last day to officially withdraw with a "W"