

<b>Instructor:</b>	Linlin Zhang <p style="text-align: right;">Email: <a href="mailto:zhanglinlin@fhda.edu">zhanglinlin@fhda.edu</a>  Canvas: <a href="https://deanza.instructure.com/">https://deanza.instructure.com/</a></p>
<b>Text:</b>	<a href="#">Calculus Volume 3</a> (Openstax)
<b>Equipment:</b>	<p><b>Scientific Calculator is sufficient, but Graphing Calculator will work too.</b></p> <p>During lesson, you can use your phone:</p> <p><b>TI Emulator Apps</b>      For iPhone: GraphNCalc83 (free with ads)  For Android: Graphing Calculator plus 84 83 (\$2.99)</p>
<b>Office Hours:</b>	<b>TTh 12:00PM – 1:00PM <a href="#">Zoom</a></b>

### 1. Course Objective:

- Examine functions and their limits of several variables. Define and determine continuity.
- Define and compute partial derivatives, directional derivatives and differentials of multivariable functions; find the equation of the tangent plane and normal line to a surface at a point
- Find local extreme values of functions of several variables, test for saddle points, examine the conditions for the existence of local and absolute extreme.
- Use rectangular, cylindrical and spherical coordinates systems to define space curves and surfaces in cartesian, parametric and vector forms.
- Integrate functions of several variables.
- Examine vector fields and define and evaluate line integrals using the Fundamental Theorem of Line Integrals and Green's Theorem; compute arc length.
- Define and compute the curl and divergence of vector fields and apply Green's Theorem, Stokes's Theorem and the Divergence Theorem to evaluate line integrals, surface integrals and flux integrals

### 2. Student Learning Outcome

- Apply analytic, graphical and numerical methods to study multivariable and vector-valued functions and their derivatives, using correct notation and mathematical precision.
- Use double, triple and line integrals in applications, including Green's Theorem, Stokes' Theorem and Divergence Theorem.
- Synthesize the key concepts of differential, integral and multivariate calculus.

### 3. Support Services

Students with disabilities needing reasonable accommodation should inform me in the beginning of the quarter. For more information, please visit the DSS office at Registration and Student Service Building 141, call (408) 864-8838 , or go to <https://www.deanza.edu/dsps/> .

#### 4. Drop Policy:

Attendance is integral to your success in this course. I expect you to attend all class meetings. **It is always YOUR RESPONSIBILITY to drop** the class if you can't continue for any reason.

#### 5. Tutoring

The Math, Science, and Technology Resource Center (**S43**) provides free online and in-person tutoring **Monday – Thursday 9AM – 6PM** and **Friday 9AM – 12PM**. For more information, go to [www.deanza.edu/studentssuccess/mstrc](http://www.deanza.edu/studentssuccess/mstrc)

You can also use “NetTutor” link on the navigation in Canvas or attend my office hour. Email me for appointments if you want to meet at alternative time.

#### 6. Academic Integrity:

Copying another student's solutions, or using unauthorized materials (online search engine or solution manual) during tests are considered cheating. Violation of this policy will result in the student receiving ZERO credit for the entire assignment or test.

#### 7. Grade:

All grades will be posted on Canvas as soon as they become available. It is your responsibilities to check Canvas at least once a week to monitor your grades for the class.

In Class (drop 2)	10%	<b>A:</b> 90-100%
Homeworks (drop 1)	15%	<b>B:</b> 80-89%
6 Quizzes (drop 1)	10%	<b>C:</b> 70-79%
2 Exams	44%	<b>D:</b> 60–69%
<u>Final Exam</u>	<u>21%</u>	<b>F:</b> 0-59%
Total	100%	

#### In Class Participation

Each lesson has in-class practice through the lessons. You will complete the assigned problems and turn them in. In-Class assignments are graded on completion and effort. In the events of absence, you will receive zero. Two lowest scores will be dropped for overall grade calculation.

#### Quizzes

Several weekly Quizzes are given near the end of class on selected Wednesday. All quizzes are open notes. If you use digital devices to take notes, please copy them or print them on paper.

#### Homework:

Homework assignments are assigned on MyOpenMath. You need to submit your answers to an online assignment(embedded in **Canvas**). Even I am not collecting work, you are supposed to work out the problems on your own paper.

#### **Late Work Policy**

Each student are given **6 late passes (7-day extension each)** this quarter. After a homework assignment is due, you should see a “late pass” button. If an assignment is due on 1/12, using one late pass will extend the due date to 1/17. After using all your late passes, you can complete an assignment in “**Practice**” mode. Make sure to email the instructor to update your grade manually. There is a **20% late penalty**.

**Midterms and Final**

*Two midterms* and *one final exam* will be given. Every test counts. You CAN'T drop any.

**8. Class Calendar**

Week	Monday	Wednesday	Notes
1	1/5 2.6 Quadric Surface 4.1 Functions of Several Variables	1/7 4.2 Limits and Continuity 4.3 Partial Derivatives	
2	1/12 4.4 Tangent Planes 4.5 Chain Rule	1/14 <b>Quiz 1</b> 4.6 Directional Derivative 4.7 Max/Min	<b>Sun. Jan. 18<sup>th</sup></b> last day to add or drop
3	1/19 MLK <b>No School</b>	1/21 <b>Quiz 2</b> 4.8 Lagrange Multipliers	
4	1/26 5.1/5.2 Double Integral Over ?? Regions	1/28 <b>Quiz 3</b> 5.3 Double Integrals in Polar	
5	2/2 5.4 Triple Integral	2/4 <b>Test 1</b> 2.6, 4.1-4.8, 5.1-5.2	
6	2/9 5.5 Triple Integral in Cylindrical and Spherical	2/11 5.6 Center of Mass	
7	2/16 Presidents' <b>No School</b>	2/18 <b>Quiz 4</b> 5.7 Change of Variables	
8	2/23 6.1 Vector Fields 6.2 Line Integrals	2/25 <b>Quiz 5</b> 6.3 Conservative Vector Fields	<b>Friday, Feb. 27<sup>th</sup></b> : last day to drop with a "W".
9	3/2 6.4 Green's Theorem	3/4 <b>Quiz 6</b> 6.5 Divergence and Curl	
10	3/9 6.6 Surface Integrals	3/11 <b>Test 2</b> 5.3-5.7, 6.1-6.4	
11	3/16 6.7 Stokes' Theorem	3/18 6.8 The Divergence Theorem	
12	3/23	3/25 <b>Final Exam</b>	



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