Math-1D-03 Calculus De Anza College Winter 2020

**Instructor:** Vinh Kha Nguyen

**Office Hours:** M,T,W,Th 9:30-10:15AM in E37

Office hours are an opportunity for students to receive free tutoring from the instructor. This is your chance to ask questions you have from studying or doing homework, to discuss your grade or seek advices. Please note that the instructor does not go over homework questions during lecture hours.

How to contact instructor: <a href="mailto:nguyenvinh@fhda.edu">nguyenvinh@fhda.edu</a> or Canvas Inbox the instructor

**Textbook:** SINGLE VARIABLE CALCULUS: EARLY TRANSCENDENTALS, 8th edition by James Stewart.

Either hard copy or eText or .pdf textbook is ok to use.

**Required Materials**: Textbook (homework) and a graphing calculator Ti-83/84 or better.

However, calculator is not allowed on all quizzes, exams, and final.

**Classroom & Time:** G2 M-F 8:30-9:20AM

**Grade** is composed of 8 homework, 4 guizzes, 3 exams and 1 final.

| 0-59% F  | 80-82% B- | 90-92% A-  |
|----------|-----------|------------|
| 60-69% D | 83-86% B  | 93-96% A   |
| 70-76% C | 87-89% B+ | 97-100% A+ |
| 77 70% C |           |            |

77-79% C+

| homework | quizzes | exams  | final  | total  |
|----------|---------|--------|--------|--------|
| 40pts    | 60pts   | 180pts | 120pts | 400pts |

**Homework:** each hw due date is posted on the course calendar. *Late homework gets Opts regardless of excuses*.

Quiz: each quiz date is posted on the course calendar. Missed quiz gets Opts regardless of excuses.

**Exam:** each exam date is posted on the course calendar. *Missed exam gets Opts regardless of excuses*.

Final: comprehensive! Will be given during final week. There is no make-up for final exam.

# Quiz, exam, and final procedure:

- Each student must place all electronic stuffs inside backpack and place it in front of the whiteboard.
- Only take what is needed for the exam to the desk such as pencil and eraser.
- If a student is caught cheating during an exam, that student gets an F in the course. Bye bye! Sayonara!
- If a student's smartphone rings during an exam, that student's exam will be taken away and will be graded as it is.
- There is no time extension for students who arrive late.

**Makeup Policy**: No makeup quizzes or exams are available. *Missed quiz or exam will be assigned 0 under all circumstances and excuses*. The final exam (converted to a percentage) will replace one missed exam due to an excused absence or emergency that *student must notify the instructor ahead of time*.

**Grade improvement:** Math is challenging, and the only way to build confidence is through practice and more practice. Other strategies: take good note during lecture, form study group, do hw sooner than later, seek help when need help, understanding rather than memorizing, prioritize tasks, do not multi-tasking while studying, etc.

# Campus tutoring, additional assistance, and Internet resources:

- On campus tutoring in S43: <a href="https://www.deanza.edu/studentsuccess/mstrc/">https://www.deanza.edu/studentsuccess/mstrc/</a>
   M-Th 8:30am-6pm, F 8:30am-12:30pm
- Student's services: <a href="https://www.deanza.edu/services/">https://www.deanza.edu/services/</a>
  Disability Support Service, EOPS, Veterans, CalWORK, Foster Youth, Food Pantry, Health Service, etc.
- The Internet: Youtube lecture video, Khan Academy, Paul's note, Wolfram Alpha, GeoGebra, etc.

# Students' responsibility:

- Students are expected to behave as educated adults, be accountable for any of your actions.
- Since the pace of the class may be quite fast at time, you are expected to seek help as soon as you realize that you are falling behind. Visit campus tutoring center, form study groups, and visit instructor office hours when possible. Instructor is always available for help or advice.
- What? Is there a time commitment for this class? YES, students are expected to spend at least two hours studying, reviewing, and doing homework outside of class for each hour in this class.
- Take good note by yourself or from another classmate. A detailed lecture note is one of the best resources to do homework and to prepare for exams and final.

**Attendance:** Students are expected to attend all class meetings, arrive on time, take note, and stay for the entire class. The instructor reserves the right to drop/withdraw students who are absent more than five lectures during the quarter. However, a student who discontinues coming to class and does not drop the course will get an **F**. It is the student's responsibility to drop the course.

**Withdrawal/Drop Policy:** It is the ultimate responsibility of the student to formally drop the class. Do not rely on the instructor to drop.

**Disruptive Student:** A student who is disruptive will be asked to leave the class. A student who refuses to leave the room will be dropped from the class and will be reported for further action.

**Smartphone Use:** All smartphones must be on silent mode and put away during lecture. We do not learn how to text or searching the Web in this class, so there is no reason to have smartphones out during class unless the instructor allows so to access Wolfram Alpha or GeoGebra during group work.

**Academic Dishonesty:** Students who submit the work of others as their own or cheat on exams or other assignments will receive a failing grade F in the course and will be reported to college authorities.

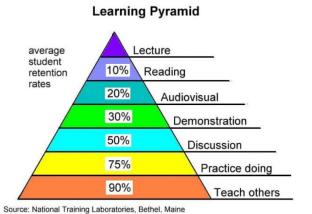
**Expected Student Conduct:** A student who is disruptive will be asked to leave the class. A student who refuses to leave the room will be dropped from the class and will be reported for further action. During the quarter, if you have any questions about the course policies, you will be first referred to this syllabus. Please make sure you keep a copy. You can find Foothill-De Anza College Code of Conduct at <a href="https://www.deanza.edu/student-development/conduct.html">https://www.deanza.edu/student-development/conduct.html</a>

**Accommodation:** Students who need additional accommodations, due to learning disability or some other reason, please contact the instructor during the first two weeks of class to discuss your options. Disability Support Services determines accommodations based on appropriate documentation of disabilities. DSS is located in Student Community Services building room 141, and their phone number is (408) 864-8753.

# **Tentative Course Calendar**

| M                             | Т                       | W                                     | Th                      | F                                       |
|-------------------------------|-------------------------|---------------------------------------|-------------------------|---|
| 1/6                           | 1/7                     | 1/8                                   | 1/9                     | 1/10                                    |
| Syllabus                      | 14.1 level curves and   | 14.2 limits,                          | 14.3 partial            | 14.3                                    |
|                               | sketching surfaces      | continuity                            | derivatives             |   |
| 1/13 Hw#2, Quiz#1             | 1/14                    | 1/15                                  | 1/16                    | 1/17                                    |
| 14.4 tangent plane            | 14.4 differentials      | 14.5 chain rule                       | 14.5                    | 14.6 direction derivatives              |
| 1/20                          | 1/21                    | 1/22 Hw#2                             | 1/23                    | 1/24                                    |
| Martin Luther King<br>Holiday | 14.6                    | Exam#1                                | 14.7 max/min values     | 14.7                                    |
| 1/27                          | 1/28                    | 1/29 Hw#3, Quiz#2                     | 1/30                    | 1/31                                    |
| 14.8 Lagrange's<br>method     | 14.8                    | 15.1 double integral over rec. region | 15.1                    | 5.2 double integral over general region |
| 2/3                           | 2/4                     | 2/5                                   | 2/6                     | 2/7                                     |
| 15.2                          | 15.3 double integral    | 15.3                                  | 15.4 application of     | 15.4                                    |
|                               | using polar coords      |                                       | double integrals        |   |
| 2/10                          | 2/11 Hw#4               | 2/12                                  | 2/13                    | 2/14                                    |
| Double integral               | Exam#2                  | 15.6 triple integrals                 | 15.6                    | President's Day                         |
| review                        |                         |                                       |                         | Holiday                                 |
| 2/17                          | 2/18                    | 2/19                                  | 2/20                    | 2/21                                    |
| President's Day               | 15.7 triple integral in | 15.7                                  | 15.8 triple integral in | 15.8                                    |
| Holiday                       | cylindrical coords      |                                       | spherical coords        |   |
| 2/24 Hw#5, Quiz#3             | 2/25                    | 2/26                                  | 2/27                    | 2/28                                    |
| 15.9                          | 15.9                    | 16.1 vector fields                    | 16.2 line integral      | 16.2                                    |
|                               |                         | 16.2                                  |                         | Work by force field                     |
| 3/2 Hw#6                      | 3/3                     | 3/4                                   | 3/5                     | 3/6                                     |
| Exam#3                        | 16.3 Fundamental        | 16.4 Green's                          | 16.4                    | 16.5 curl and                           |
|                               | theorem of line         | Theorem                               |                         | divergence                              |
|                               | integral                |                                       |                         |   |
| 3/9 Hw#7, Quiz#4              | 3/10                    | 3/11                                  | 3/12                    | 3/13                                    |
| 16.6 surface area             | 16.6                    | 16.7 surface integral                 | 16.7                    | 16.8 Stoke theorem                      |
| 3/16                          | 3/17                    | 3/18                                  | 3/19                    | 3/20                                    |
| 16.8                          | 16.9 Gauss theorem      | 16.9                                  | Final review            | Final review                            |
| 3/23                          | 3/24                    | 3/25 Hw#8 due                         | 3/26                    | 3/27                                    |
|                               |                         | FINAL EXAM                            |                         |   |
|                               |                         | 7-9am                                 |                         |   |

1/18 Last day to add 1/19 Last day to drop 2/28 Last day to drop with a W 3/23-3/27 Final Exam week



#### **CALCULUS 1D Homework**

- Homework is graded on completeness and neatness, see tentative calendar for due date.
- Why should students care about showing work and getting the correct answers?
  - Practice makes confidence
  - Help to do similar problems much faster on exam
- Students are responsible to do all homework and submit the work on time,
  - o Hw submitted without staple is -1pt
  - Hw without Last Name, First Name format is -1pt
  - o Hw without clear sections labeling & problems listing is -1pt
  - O Starting new section NOT on new paper will be -1pt
  - Hw without show work will be -1pt for each section (Do NOT write only the answer)
  - o Late hw gets a solid 0pt, so do not submit late hw.

#### Hw#1

14.1 #8, 13, 15, 17, 19, 25, 27, 29, 36, 41, 44, 45, 47, 49, 55, 67, 69 pg. 899-903

14.2 #1, 5, 7, 9, 13, 15, 17, 29, 31, 33, 35, 37 pg. 910-911

14.3 #15, 17, 18, 19, 20, 21, 25, 33, 34, 53, 55, 57, 75, 77, 83, 91 pg. 924-927

#### Hw#2

14.4 #1, 2, 3, 4, 6, 34, 35, 39, 40 pg. 934-936

14.5 #1, 3, 5, 7, 9, 11, 21, 23, 27, 29, 35, 41, 49 pg. 943-945

14.6 #1, 2, 7, 9, 13, 15, 17, 21, 23, 25, 29, 31, 33 pg. 956-957

#### Hw#3

14.7 #3, 5, 11, 15, 19, 21, 31, 35, 37, 41, 43, 51, 53 pg. 967-968

14.8 #1, 3, 5, 7, 9, 21, 23, 29, 31, 35, 37 pg. 977-978

## Hw#4

15.1 #15, 17, 19, 21, 23, 25, 27, 31, 33, 40, 43 pg. 999-1000

15.2 #5, 9, 15, 16, 19, 20, 23, 24, 25, 26, 35, 38, 45, 47, 59, 51, 53 pg. 1008-1009

15.3 #1, 3, 5, 7, 9, 11, 19, 21, 23, 25, 27, 29, 30, 31, 32, 39 pg. 1014-1015

15.4 #1, 2, 5, 11, 13, 15, 16, 19, 27, 28 pg. 1024-1026

### Hw#5

15.6 #3, 4, 5, 6, 7, 8, 9, 13, 17, 21, 27, 33, 35 pg. 1037-1039

15.7 #1, 3, 7, 9, 15, 17, 21, 23, 25a, 29 pg. 1043-1044

15.8 #1, 3, 9, 21, 23, 25, 27, 35, 41 pg. 1049-1051

#### Hw#6

15.9 #1, 3, 5, 11, 13, 23, 25, 27 pg. 1060

16.1 #11-18, 21, 22, 23, 24, 35 pg. 1073-1074

16.2 #1, 3, 5, 9, 11, 13, 15, 18, 19, 21, 33, 39, 41, 45 pg. 1084-1086

### Hw#7

16.3 #1, 3, 5, 7, 9, 13, 15, 17, 23, 25 pg. 1094-1095

16.4 #1, 5, 7, 9, 11, 13, 17, 19, 28 pg. 1101-1103

16.5 #1, 3, 5, 7, 9, 13, 15, 19, 21, 22, 37 pg. 1109-1110

#### Hw#8

16.6 #19, 21, 23, 25, 39, 41, 43, 45, 47, 49 pg. 1120-1121

16.7 #5, 7, 9, 21, 23, 25, 27 pg. 1132-1133

16.8 #1, 3, 5, 7, 9, 14, 17 pg. 1139

16.9 #5, 7, 9, 11, 13 pg. 1145

# **Student Learning Outcome(s):**

- \*Graphically and analytically synthesize and apply 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.