CALCULUS III - MATH 2057
SECTION 10

1. Course Information

- **Course:** Math 2057 Section 10
- **Text:** *Calculus, Early Transcendentals*, 7th Edition
- **Author:** James Stewart
- **Course Content:** Chapters 14-16.
- **Classroom:** 232 Lockett Hall
- **Time:** 12:30 - 1:20 pm M W F
- **Website:** www.math.lsu.edu/∼chermosilla/Math2057.html

2. Instructor Information

- **Instructor:** Cristopher Hermosilla
- **Office:** 339 Lockett Hall
- **Office Hours:** M W F 2:30 - 3:15 pm, or by appointment
- **email:** chermosilla@lsu.edu

3. Course Description

This three-hour course on multi-dimensional calculus is designed for math, science and engineering majors and certain other technical majors. The main goal of this course is to provide you an insight into calculus of several variables and extend all what you might know about calculus to a multi-dimensional context. It covers partial derivatives, multiple integrals and vector fields.

As a 3-credit course, students are expected to have six hours of coursework outside of class per week, for a minimum time commitment of 9 hours per week.

4. Homework

It will be assigned and published on the web page after each lecture. Homework will not be collected and will not have a direct impact on the final grade. Nevertheless, the goal of homework is to facilitate the understanding of the class materials and prepare yourselves for quizzes and exams; in other words, it will have an **indirect impact on your final grade**.

We **will not** be using WebAssign in this opportunity.

There will be 3 tutorial sessions within the semester:

Date	Contents to be studied
Monday, September 21st	Chapter 14
Monday, October 19th	Chapter 15
Monday, November 16th	Chapter 16 (less Section 16.9)

5. GRADED WORK

5.1. **Quizzes.** There will be 5 quizzes (each worth 20 points) at the beginning of some Friday's class (see details below). Quiz problems are very similar to the homework problems and will be focus on a particular topic. Quiz scores will be accumulated to count 20% of your final grades.

Date	Contents to be evaluated
Friday, September 4th	Section 14.2
Friday, September 18th	Section 14.5
Friday, October 9th	Section 15.2
Friday, October 16th	Section 15.7
Friday, November 6th	Section 16.3

5.2. **Tests.** There will be 3 midterm in-class exams, each one of them covering an entire chapter of Stewart's book (except for the last one). Midterm in-class exams scores will be averaged to count 40% of your final grades.

Date	Contents to be evaluated
Monday, September 28th	Chapter 14
Monday, October 26th	Chapter 15
Monday, November 23rd	Chapter 16 (less Section 16.9)

5.3. **The Final Exam.** The final exam will take place on a date determined by the university. The final comprehensive exam will count 40% of your final grade as well.

5.4. **Final grade.** Your final grade will be calculated as follows:

Final Exam	40%
Midterm Exams	40%
In-Class Quizzes	20%

5.5. **Grading scale.** Any score equal or below 59.9 will be considered as F. This course will follows the +/- system, which will be as follows

A-	90-92.9	A	93-96.9	A+	97-100
B-	80-82.9	B	83-86.9	B+	87-89.9
C-	70-72.9	C	73-76.9	C+	77-79.9
D-	60-62.9	D	63-66.9	D+	67-69.9

6. POLICIES

6.1. **Attendance.** Attendance to classes is not mandatory but is, of course, highly recommended. Any missing exam or quiz will be automatically scored with 0 points, unless the student present a properly documented excuse for missing an assignment. The missed assignment must be made up within three days.

6.2. **Collaboration.** You may collaborate with others while doing homework or studying for tests. Nevertheless, work on in-class exams must be your own work with no assistance from anyone else. During an exam, attempts to look at other students' exams and the use of crib sheets or formula sheets will be considered to be a violation of the LSU Code of Student Conduct and will be reported to the Student Advocacy and Accountability Office.

6.3. **Punctuality.** You must arrive on time at classroom. It is highly recommended to arrive 5 minutes before the starting time. However, if you are late, please enter quietly and try not to disturb too much the instructor and other students.

6.4. **Electronic devices.** No electronic devises (such as calculators or smart-phones) are allowed in class or during graded work. However, you can use any technology available to help with homework. All cell phones must be turned off prior to class.

7. TOPICS COVERED

A partial list of basic skills you should acquire during the course.

(1) An understanding of limits and continuity of functions of several variables
(2) The ability to compute partial derivatives and directional derivatives
(3) An understanding of linear approximation for multi-variable functions
(4) An introduction to optimization of multi-variable functions using the second derivative and Lagrange Multipliers
(5) The ability to evaluate iterated integrals over non-rectangular regions
(6) The ability to use multiple integrals to calculate areas, volumes, masses and centers of mass for standard plane regions and solids
(7) An introduction to line integrals, path-independence, potential functions and surface integrals
(8) An understanding of Green's Theorem, the Divergence Theorem and Stoke's Theorem

8. MISCELLANEOUS READING

- *Flatland, A romance of many dimensions*, Edwin A. Abbott.