SYLLABUS

Calculus, SPRING 2015

Instructor:	Lee, Chih-Ming
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Class Hours:	Wednesday, 09:10-12:00

Course objectives

This course is an introduction to calculus and its applications to the management, social, behavioral, and biomedical sciences, and other fields. This course is designed to be applied and real-world orientation to concepts, problem-solving approach, straightforward, concise and comprehensive exercise practice.

Course Description

- Introduction
- Derivatives and Their Uses
- Further Applications of Derivatives
- Integration and its Applications
- Integration Techniques

Class schedule

Week	Date	Contents
1	2/19	Limits and Continuity
2	2/26	Slopes and Derivatives
3	3/5	The Product and Quotient Rules
4	3/12	The Chain Rule
5	3/19	Graphing Using Derivatives
6	3/26	Optimization
7	4/2	Further Applications of Optimization
8	4/9	Implicit Differentiation and Related Rates
9	4/16	Midterm Exam
10	4/23	Differential of Logarithmic and Exponential Functions
11	4/30	Indefinite Integrals
12	5/7	Integration Using Logarithmic and Exponential Functions
13	5/14	Definite Integrals and Area
14	5/21	Applications of Definite Integrals
15	5/28	Integration by Substitution, Parts, Improper Integrals
16	6/4	Group Project Presentation

17	6/11	Group Project Presentation
18	6/18	Final Exam

Teaching approach

Students are encouraged to discuss and share the ideas of course materials in the class at least 3 times. Each student is required to join and do the group project.

Course requirements/Grading standards

Group Project	30%
In-class Discussion	10%
Midterm Exam	30%
Final Exam	30%

Three to four students need to form a group. They need to select an application of calculus in their daily life.

Textbook & references

Berresford, G.C. and Rockett, A. M., Brief Calculus, 2013, Brooks/Cole, Cengage Learning, International Edition