Capital University of Economics and Business
Overseas Chinese College
Course Syllabus

Year and Semester	2019 Fall (September 2, 2019 - January 10, 2020)
Course Name	Calculus I
Course Code	MAT 111
Course Type	☑ General Education (Required) ☐ General Education (Elective) ☐ Professional Course (Required) ☐ Professional Course (Elective) ☐ Basic Disciplinary Course
Course Credits	4
Course Hours	64
Prerequisites	None
Instructor	Ling Li
Contact Information	Office: C217 Tel: 010-83961082 Email: liling@cueb.edu.cn
Office Hour	TBA
Learning Centre	TBA
Grade/Section	2019BA1/Y01 2019BA2/Y02 2019ACCA1/Y03 2019ACCA2/Y04
Course Time/Place	M: 8:00-9:50/A101 10:10-12:00/A102 T: 10:10-12:00/A105 W: 8:00-9:50/A101 10:10-12:00/A104 TH: 10:10-12:00/A102 F: 10:10-12:00/A104

Textbook

James Stewart. Calculus (Seventh Edition). Higher Education Press. ISBN: 978-7-040-39620-1

Reference Book

1. Colin Adams, Joel Hass, Abigail Thompson: How to Ace Calculus-The Streetwise Guide, W H Freeman & Co (1998), ISBN: 0-716-73160-6

2.Anton, Bivens & Davis. Calculus (Seventh Edition). John Wiley & Sons, Inc(2002). ISBN: 0-471-38157-8

Course Description

This course will focus on single variable calculus. It contains: function, limit and continuity, derivative and its applications, the concept and property of definite and indefinite integrals and the application of them, the differential equation and its application.

Student Learning Objectives

After completing this course, students will be able to:

- Good computational ability
- Logical ratiocinating ability
- The using known knowledge to resolve unknown problem ability
- Deeper understanding of functions
- Able to use the derivative and integral to set up and solve mathematical questions
- Able to solve the questions to differential equations

Website Source

1. https://www.khanacademy.org
2. https://www.geogebra.org

Teaching Methods

This course consists of lectures, discussions and student presentations. Students will be divided into small groups with a group leader helping others in the group. Students must be prepared to finish some small questions and small quizzes during the class.

Grade Criterion

Component	Weight	Description
Final Exam	20%	A cumulative final examination will be given based on all of the contents of the class. A minimum of 25% of the exam (5 of the 20%) will consist of questions utilizing the application of critical thinking.
Mid-Term Test	20%	A cumulative midterm examination will be given based on all of the contents of the first half of the class. A minimum of 25% of the exam (5 of the 20%) will consist of questions utilizing the application of critical thinking.
Homework	15%	Homework problems will be assigned throughout the term, including but not limited to: terminologies, research project, and reading assignments.
Quizzes	15%	There will be at least 2 quizzes during the semester. The purpose of the quizzes is to ensure that students keep up with the readings. It may also be used as a way to check the attendance. Quizzes will test your knowledge of both concepts and the application of those concepts.
Presentation	10%	The students will be divided into several groups to prepare a presentation. Each student is required to be involved in the presentation. The topics can be selected from the textbook or lectures. Each group need to finish a PPT related to the topic which is given and hand in the related resources to the teacher before the presentation. The percentage is : content50%+organization10%+language15%+performance25%
Participation	10%	Individuals will be asked to participate individually in questions during the semester. Students are required to meet with their teachers every week. Their performances should be counted in their participation.
Attendance	10%	Refer to attendance policy listed below
Total	100%	

Detailed Grade Computation

	Before Midterm	After Midterm
Attendance	5%	5%
Participation	5%	5%
Homework	5%	10%
Quizzes	5%	10%
Presentation		10%
Midterm test	20%	
Final exam		20%
Total	40%	60%

Grading Policy

A+ 97-100	A 93-96	A- 90–92	B+ 87-89	B 83-86	B- 80–82
C+ 75-79	C 70-74	C- 67–69	D+ 63–66	D 62-60	F 0- 59

Exam Schedule

Midterm Test: Oct 28-Nov 1, 2019;
Final Exam: Jan 6-10, 2020

Assessment of Student Performance

☞ ***Self-Study and Reading ability Practice***

Instructor will give out the chapters or the reference books to read and use class hours to have discussion; students should be able to show a proactive attitude and ability for self-study and reading. Knowledge and oral English will be elements of homework or presentation score.

☞ ***Homework***

Students should finish their homework by themselves. Copying from others will be treated as cheating and the homework scores will be lowered. Students should hand in all assignments on time. Late assignments will be accepted at the discretion of the instructor (i.e., when the student was ill or had an excused absence). Late assignments without reasonable proof will be reduced in score by 50%.

☞ ***Attendance***

Because the course covers a great deal of material, attending every class session is very important for performing well.

- Being late for 15 minutes or more is considered an absence.
- Five hours or above of unexcused absences will result in the lower level of the final grade by one grade band (e.g. from C – to D +). Any excused absence must be discussed directly with the teacher.
- Absence which is more than 1/3 of the total teaching hours will cause an F (a failing grade) directly, but students are welcome to continue attending classes.
- An incomplete grade (I) will be considered in case of medical or family emergencies.

☞ ***Participation***

- Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their

own opinions. Every student should respect the ideas, opinions, and questions of their classmates.

- Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- Frequent visiting the instructor and chatting in English during office hours is highly recommended.
- Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- All above behaviors will be solely evaluated by the instructor for scoring.

☞ ***Textbook***

Students must bring the textbook to class.

Topical Course Outline

Week	Date	Topics	Homework
4	Sept.23-Sept.27	● Chapter 1 1. Better understanding of definition and properties of functions 2. Master some essential kinds of functions 3. Master the composite function 4. Master the property of inverse function	——
5	Oct.1-Oct.5	●National Holiday	——
6	Oct.7-Oct.11	● Chapter 1 5. Master the exponential and logarithm function 6. Master the inverse trigonometric function ● Chapter 2 1. Master the definition of limit 2. Can calculate limits by using limit laws expertly 3. Master the definition and property of continuity, can determine whether a function is continuous or not, can apply intermediate value theorem to some questions;	——
7	Oct.14-Oct.18	● Chapter 2 4. Know how to calculate limits at infinity, and know how to find vertical and horizontal asymptotes 5. Master the definition of derivative, and can use definition to find derivative 6. Can find derivative as a function	——
8	Oct.21-Oct.25	● Chapter 3 1. Know how to find derivative of polynomials and exponential functions 2. Master the product and quotient rules 3. Master how to calculate derivative of trigonometric functions ● Quiz I	——
9	Oct.28-Nov.1	4. Master how to use the chain rules 5. Master how to find derivative of implicit functions ● Midterm Test	——
10	Nov.4-Nov.8	● Chapter 3 6. Master how to find higher derivatives 7. Can find derivative of logarithmic functions	——
11	Nov.11-Nov.15	8. Master the definition of differentials	——

		9. Master how to understand the linear approximation ● Chapter 4 1. Can find maximum and minimum values of a function	
12	Nov.18-Nov.22	2. Master the mean value theorem and its application 3. Know how derivative affect the shape of a graph 4. Know how to sketch a graph	——
13	Nov.25-Nov.29	5. Know what is indeterminate form and the can use L'Hospital's Rule to find limit	——
14	Dec.2-Dec.6	6. Continue about how to apply the L'Hospital's Rule 7. Know how to use calculus to solve optimization 8. Know the meaning of anti-derivatives and can find it ● Chapter 5 1. Understand the area and distance problem	——
15	Dec.9-Dec.13	2. Master the definition of definite integral 3. Master the fundamental theorem of calculus	——
16	Dec.16-Dec.20	4. Can calculate integral by using substitution ● Quiz II	——
17	Dec.23-Dec.27	● Students' presentation	——
18	Dec.30-Jan.3	● Self-review by the students	——
19	Jan.6-Jan.10	● Final Exam	

Note: *Some chapters or sections may leave for self-study, this is the students' duty to learn and understand, they may also be included in the quizzes or exams.*

A review in Chinese may be held during L.C. and O.H. in the semester.

Teacher's Office Hour

- The instructor's office hour is shown in the front of the office door.
- Students are suggested to use the instructor's office hour and learning center to ask questions or talk with the instructor once at least per week for good communication and effective learning, which is recorded in the students' participation.
- The time can be scheduled by instructors or students, or both.

Cheating and Plagiarism

Cheating is not tolerated. Any student caught cheating on a quiz; test or exam will be given a mark of zero (0) for the particular work. At the beginning of the semester the definition of plagiarism will be carefully explained, when any thoughts or writings of another person are used, they must be clearly identified (usually one uses quotation marks) and the source notes. **If any student is caught cheating on any homework assignment, the highest score the student can earn in that course is a "C".**

Important Dates

Fall Semester, 2019	**August 30, 2019— January 10, 2020**
Aug. 30	Registration
Sept.2	Classes Begin
Sept.3 - 20	Freshmen's Military Training
Sept.23	Classes Begin（Freshmen）

Oct.1 - 5	National Day Holiday (tentative)
Oct.28 - Nov.1	Mid-term Test
Jan.1, 2019	New Year's Day Holiday (tentative)
Jan.7 - 11	Final Exam Period
Jan.14	Winter Vacation Begins

Note: *This syllabus is tentative and may be changed or modified throughout the semester. All students will be notified and a new syllabus will be given.*

Instructor: Li Ling **Department Head: Prof. Jingning Li**