Calculus

Global Program on Economics and Finance (Fall 2022)

Course Title	Calculus		
Credit	3	**Credit Hours**	48 credit hours
Course Objectives	Calculus is a basic course for undergraduate students. This course offers an introduction to the basic concepts of intergal. It focuses on the basic definition of functions and operations on them. After that we study the theory of limit, using that one can investigate the continuity and differentiation of functions. Then we will give some applications of the derivative function. The study of math relies on the understanding and application of basic concepts and theorems related to the theory of differentiation. The study of mathematics provides students with an understanding of systems that is the basis of the development of technological applications. The study of mathematics will affect deeply to the future study of the students.		
Course Description	Students will develop knowledge and understanding of: 1) The definition of functions 2) Arithmetic operations on and composition of functions 3) Basic elementary functions 4) Definition and calculation on limit and its application on geometric 5) Derivative function and its calculation 6) Application of the derivative functions in graphing and extreme-value problem 7) Antiderivative and integral		

Course Requirements:
Prerequisites: None. Any qualified high school graduates are welcome to take this course.

Teaching Methods:
Face-to-face lectures.

Course Schedule

No	Contents	Credit Hours
1	Basic definition of functions and operations on them	**8**

2	Limits and continuity	12
3	The derivative	10
4	Applications of the derivative	9
5	Integral	9
Total		**48**

The design of class discussion or exercise, practice, experience and so on:
Students should complete homework and attend two quizzes and one final examination.

Grading & Evaluation:
Attendance: 10%
Homework assignments: 10%
Two quizzes: 20%
Final exam (closed-book): 60%

Teaching Materials & References:

Textbooks:

Howard Anton, Irl Bivens and Stephen Davis, *Calculus.* Eighth edition. Higher education press, China, 2007. ISBN: 9787040226645.

Reference books:

(1)《Advanced mathmatics》 (7th Edition)(Extended Edition), School of Mathematical Sciences, Higher education press, China, 2014. ISBN: 9787040396638.