Tamkang University Academic Year 109, 1st Semester Course Syllabus

Course Title	CALCULUS	Instructor	HSIAO-FAN LIU
Course Class	TLWXB1A BACHELOR'S PROGRAM IN GLOBAL FINANCIAL MANAGEMENT (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ General Course ◆ Required ◆ 1st Semester

Departmental Aim of Education

Ⅰ. Acquisition of professional knowledge.

Ⅱ. Learning effective self-planning.

Ⅲ. Theoretical application of practical matters.

Ⅳ. Interpersonal communication and teamwork.

Ⅴ. Analysis of problems and recommendations.

Ⅵ. Awareness of Ethics as a global citizen.

Subject Departmental core competences

A. Students can demonstrate that they have program basic knowledge of business and management.(ratio:50.00)

D. Students can demonstrate that they are critical thinkers.(ratio:50.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:20.00)

5. Independent thinking. (ratio:80.00)

Course Introduction	This course introduces Calculus with applications in business, economics, and the social and life sciences. We will focus on functions, differentiation, applications of the derivative, and exponential and logarithmic functions.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

Ⅰ. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

Ⅱ.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

Ⅲ.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Students are expected to understand the concepts and theory of limit, continuity, and derivative of a function, and to solve practical problems with these techniques.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	AD	25	Lecture, Discussion	Testing, Discussion(including classroom and online), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	109/09/14 ~ 109/09/20	1.1 Functions, 1.2 The Graph of a Function	
2	109/09/21 ~ 109/09/27	1.3 Lines and Linear Functions, 1.4 Functional Models	
3	109/09/28 ~ 109/10/04	1.5 Limits, 1.6 One-Sided Limits and Continuity	
4	109/10/05 ~ 109/10/11	2.1 The Derivative	
5	109/10/12 ~ 109/10/18	2.2 Techniques of Differentiation	
6	109/10/19 ~ 109/10/25	2.3 Product and Quotient Rules; Higher-Order Derivatives	
7	109/10/26 ~ 109/11/01	2.4 The Chain Rule	
8	109/11/02 ~ 109/11/08	2.5 Marginal Analysis and Approximations Using Increments	
9	109/11/09 ~ 109/11/15	2.6 Implicit Differentiation and Related Rates	
10	109/11/16 ~ 109/11/22	Midterm Exam Week	

11	109/11/23 ~ 109/11/29	3.1 Increasing and Decreasing Functions; Relative Extrema, 3.2 Concavity and Points of Inflection	
12	109/11/30 ~ 109/12/06	3.3 Curve Sketching, 3.4 Optimization; Elasticity of Demand	
13	109/12/07 ~ 109/12/13	3.5 Additional Applied Optimization	
14	109/12/14 ~ 109/12/20	4.1 Exponential Functions; Continuous Compounding, 4.2 Logarithmic Functions	
15	109/12/21 ~ 109/12/27	4.3 Differentiation of Exponential and Logarithmic Functions	
16	109/12/28 ~ 110/01/03	4.4 Additional Applications; Exponential Models	
17	110/01/04 ~ 110/01/10	Review	
18	110/01/11 ~ 110/01/17	Final Exam Week	

Requirement	
Teaching Facility	(None)
Textbooks and Teaching Materials	Calculus for Business, Economics, and the Social and Life Sciences, Brief edition by Hoffmann, Bradley, Sobecki, Price, 11th edition
References	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 　　 %　 ◆ Mark of Usual：10.0 %　 ◆ Midterm Exam： 30.0 % ◆ Final Exam： 40.0 % ◆ Other〈Quizzes & Discussion〉：20.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**