

Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title	CALCULUS	Instructor	CHIANG, CHIEH
Course Class	TLFBB1A DIVISION OF GLOBAL COMMERCE, DEPARTMENT OF INTERNATIONAL BUSINESS (ENGLISH-TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ 1st Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education		
Departmental Aim of Education			
<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> A. Students can demonstrate that they have program basic knowledge of business and management.(ratio:40.00) B. Students can demonstrate that they have capability in professional knowledge expression. (ratio:10.00) C. Students can demonstrate that they have capability in using information technology. (ratio:10.00) D. Students can demonstrate that they are critical thinkers.(ratio:40.00) 			
Subject Schoolwide essential virtues			
<ul style="list-style-type: none"> 1. A global perspective. (ratio:5.00) 2. Information literacy. (ratio:20.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:15.00) 5. Independent thinking. (ratio:30.00) 6. A cheerful attitude and healthy lifestyle. (ratio:5.00) 			

7. A spirit of teamwork and dedication. (ratio:10.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction

This course introduces Calculus together with its applications. Topics include limits, differentiation and exponential/logarithmic Functions. Relevant applications to the areas of business, economics, and the social sciences will also be discussed.

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 of limit and continuity, as well as being familiar with computing the derivatives of elementary functions such as polynomials and exponential/logarithmic functions. Also, they are expected to use these techniques to solve practical problem occurring in the relevant areas.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCD	12345678	Lecture, Practicum	Testing

Course Schedule

Week	Date	Course Contents	Note
1	113/09/09 ~ 113/09/15	Moon Festival	
2	113/09/16 ~ 113/09/22	1.1 Functions, 1.2 The graph of a function	

3	113/09/23 ~ 113/09/29	1.3 Lines and linear functions, 1.4 Functional models	
4	113/09/30 ~ 113/10/06	1.5 Limits, 1.6 One-sided limits and continuity	
5	113/10/07 ~ 113/10/13	2.1 The derivative; 2.2 Techniques of differentiation	
6	113/10/14 ~ 113/10/20	2.3 Product and quotient rules; higher-order derivatives	
7	113/10/21 ~ 113/10/27	2.4 The chain rule	
8	113/10/28 ~ 113/11/03	2.5 Marginal analysis and approximations using increments	
9	113/11/04 ~ 113/11/10	Midterm Exam Week	
10	113/11/11 ~ 113/11/17	3.1 Increasing and decreasing functions; relative extrema	
11	113/11/18 ~ 113/11/24	3.2 Concavity and points of inflection	
12	113/11/25 ~ 113/12/01	3.3 Curve sketching	
13	113/12/02 ~ 113/12/08	3.4 Optimization; elasticity of demand	
14	113/12/09 ~ 113/12/15	3.5 Additional applied optimization	
15	113/12/16 ~ 113/12/22	4.1 Exponential functions; continuous compounding	
16	113/12/23 ~ 113/12/29	4.2 Logarithmic functions	
17	113/12/30 ~ 114/01/05	Final Exam Week	
18	114/01/06 ~ 114/01/12	Discussion for the result of the final exam	
Key capabilities			
Interdisciplinary			
Distinctive teaching			
Course Content		Logical Thinking	

Requirement	
Textbooks and Teaching Materials	<p>Self-made teaching materials:Textbooks Name of teaching materials: Hoffmann - Calculus For Business,Economics, and the Social and Life Sciences ISBN:9780071310710</p> <p>Using teaching materials from other writers:Textbooks Name of teaching materials: Hoffmann - Calculus For Business,Economics, and the Social and Life Sciences ISBN:9780071310710</p>
References	
Grading Policy	<p>◆ Attendance : % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : 40.0 %</p> <p>◆ Final Exam : 40.0 %</p> <p>◆ Other () : %</p>
Note	<p>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 .</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>