

## Tamkang University Academic Year 108, 1st Semester Course Syllabus

Course Title	CALCULUS	Instructor	HSIANG-CHUN HSU
Course Class	TLWXB1A BACHELOR'S PROGRAM IN GLOBAL FINANCIAL MANAGEMENT (ENGLISH-TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> <li>◆ General Course</li> <li>◆ Required</li> <li>◆ 1st Semester</li> </ul>
D e p a r t m e n t a l   A i m   o f   E d u c a t i o n			
<p>I. Acquisition of professional knowledge.</p> <p>II. Learning effective self-planning.</p> <p>III. Theoretical application of practical matters.</p> <p>IV. Interpersonal communication and teamwork.</p> <p>V. Analysis of problems and recommendations.</p> <p>VI. Awareness of Ethics as a global citizen.</p>			
S u b j e c t   D e p a r t m e n t a l   c o r e   c o m p e t e n c e s			
<p>A. Students can demonstrate that they have program basic knowledge of business and management.(ratio:50.00)</p> <p>D. Students can demonstrate that they are critical thinkers.(ratio:50.00)</p>			
S u b j e c t   S c h o o l w i d e   e s s e n t i a l   v i r t u e s			
<p>2. Information literacy. (ratio:20.00)</p> <p>5. Independent thinking. (ratio:80.00)</p>			
Course Introduction	<p>This course introduces calculus with applications in business, economics, and the social and life sciences. Topics in this semester include: functions and models, the derivative, techniques of differentiation, and applications of differentiation.</p>		

**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 will be able to understand the concepts and theory of limit, continuity, and derivative of a function, and to solve real-world 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	Testing

**Course Schedule**

Week	Date	Course Contents	Note
1	108/09/09 ~ 108/09/15	1.1 Functions and Their Representations, 1.2 Combining and Transforming Functions	
2	108/09/16 ~ 108/09/22	1.3 Linear Models and Rates of Change, 1.4 Polynomial Models and Power Functions	
3	108/09/23 ~ 108/09/29	1.5 Exponential Models, 1.6 Logarithmic Functions	
4	108/09/30 ~ 108/10/06	2.1 Measuring Change, 2.2 Limits	
5	108/10/07 ~ 108/10/13	2.3 Rates of Change and Derivative, 2.4 The Derivative as a Function	
6	108/10/14 ~ 108/10/20	3.1 Shortcut to Finding Derivatives, 3.2 Introduction to Marginal Analysis	
7	108/10/21 ~ 108/10/27	3.3 The Product and Quotient Rules, 3.4 The Chain Rule	
8	108/10/28 ~ 108/11/03	3.5 Implicit Differentiation and Logarithms	
9	108/11/04 ~ 108/11/10	3.6 Exponential Growth and Decay	
10	108/11/11 ~ 108/11/17	Midterm Exam Week	

11	108/11/18 ~ 108/11/24	4.1 Related Rates	
12	108/11/25 ~ 108/12/01	4.2 Maximum and Minimum Values	
13	108/12/02 ~ 108/12/08	4.3 Derivatives and the Shapes of Curves	
14	108/12/09 ~ 108/12/15	4.4 Asymptotes, 4.5 Curve Sketching	
15	108/12/16 ~ 108/12/22	4.6 Optimization	
16	108/12/23 ~ 108/12/29	4.7 Optimization in Business and Economics	
17	108/12/30 ~ 109/01/05	Review	
18	109/01/06 ~ 109/01/12	Final Exam Week (Date:109/1/3-109/1/9)	
Requirement			
Teaching Facility	(None)		
Textbooks and Teaching Materials	Brief Applied Calculus, International Edition (2015), by Stewart and Clegg.		
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance :            %    ◆ Mark of Usual :            %    ◆ Midterm Exam : 35.0 % ◆ Final Exam :    35.0 % ◆ Other 〈Homework and Quizzes〉 : 30.0 %		
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a> . <b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b>		