Tamkang University Academic Year 111, 2nd Semester Course Syllabus

Course Title	CALCULUS	Instructor	HSIAO-FAN LIU
Course Class	TLBAB1A DEPARTMENT OF BANKING AND FINANCE DIVISION OF GLOBAL FINANCIAL MANAGEMENT (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ General Course ◆ Required ◆ 2nd Semester
Relevance to SDGs	SDG4 Quality education		

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: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

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 semester, we will focus on exponential functions, integration and its applications to real-life problems, especially in the region of business. We will also learn some techniques that enable us to find the integration of given 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 shall be familiar with the definition of integration and also manage to use techniques that find them with the integration of a given function. Students are also expected to apply integration on problems arising from the business.	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, Discussion	Testing, Discussion(including classroom and online)

Course Schedule

Week	Date	Course Contents	Note
1	112/02/13 ~ 112/02/19	4.1 Exponential Functions; Continuous Compounding; 4.2 Logarithmic Functions	

2	112/02/20 ~ 112/02/26	4.3 Differentiation of Exponential and Logarithmic Functions	
3	112/02/27 ~ 112/03/05	4.4 Additional Applications; Exponential Models	
4	112/03/06 ~ 112/03/12	5.1 Indefinite Integration and Differential Equations	
5	112/03/13 ~ 112/03/19	5.2 Integration by Substitution	
6	112/03/20 ~ 112/03/26	5.3 The Definite Integral and the Fundamental Theorem of Calculus	
7	112/03/27 ~ 112/04/02	5.4 Applying Definite Integration: Average Value; 5.5 Additional Applications of Integration to Business and Economics	
8	112/04/03 ~ 112/04/09	5.6 Additional Applications of Integration to the Life and Social Sciences	
9	112/04/10 ~ 112/04/16	6.1 Integration by Parts; Review	
10	112/04/17 ~ 112/04/23	Midterm Exam Week	
11	112/04/24 ~ 112/04/30	6.3 Improper Integrals	
12	112/05/01 ~ 112/05/07	7.1 Functions of Several Variables	
13	112/05/08 ~ 112/05/14	7.2 Partial Derivatives	
14	112/05/15 ~ 112/05/21	7.3 Optimizing Functions of Two Variables	
15	112/05/22 ~ 112/05/28	7.4 The Method of Least-Squares	
16	112/05/29 ~ 112/06/04	7.5 Constrained Optimization	
17	112/06/05 ~ 112/06/11	7.6 Double Integrals; Review	
18	112/06/12 ~ 112/06/18	Final Exam Week	

Requirement	
Teaching Facility	Computer, Projector, Other (blackboard)
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： % ◆ Midterm Exam： 40.0 % ◆ Final Exam： 40.0 % ◆ Other〈Quiz 10%; TA 10%〉：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.**