Tamkang University Academic Year 108, 2nd Semester Course Syllabus

Course Title	CALCULUS	Instructor	CHIAN-JEN WANG
Course Class	TLFBB1A DIVISION OF GLOBAL COMMERCE, DEPARTMENT OF INTERNATIONAL BUSINESS (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ General Course ◆ Required ◆ 2nd 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 introductory calculus course covers differentiation and integration with applications in business, economics, and the social and life sciences. Topics to be discussed in this semester include: antiderivatives and indefinite integrals, definite integrals and areas, fundamental theorem of calculus, integration techniques, calculus of several variables, Lagrange multipliers and constrained optimization.

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 concept of integration in calculus.	Cognitive
2	Students will be able to apply techniques of integration to solve real-world problems	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, Study Assignments, Discussion(including classroom and online)
2	AD	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

Course Schedule

Week	Date	Course Contents	Note
1	109/03/02～109/03/08	Derivatives and Antiderivatives	
2	109/03/09～109/03/15	5.1 Cost, Area, and the Definite Integral	
3	109/03/16～109/03/22	5.2 The Fundamental Theorem of Calculus	
4	109/03/23～109/03/29	5.3 The Net Change Theorem and Average Value	
5	109/03/30～109/04/05	5.4 The Substitution Rule	
6	109/04/06～109/04/12	5.5 Integration by Parts	
7	109/04/13～109/04/19	6.1 Area Between Curves	Midterm 1
8	109/04/20～109/04/26	6.2 Applications to Economics	

9	109/04/27 ~ 109/05/03	Midterm Exam Week	
10	109/05/04 ~ 109/05/10	6.5 Improper Integrals	
11	109/05/11 ~ 109/05/17	6.6 Probability	
12	109/05/18 ~ 109/05/24	7.1 Functions of Several Variables	Midterm2
13	109/05/25 ~ 109/05/31	7.2 Partial Derivatives	
14	109/06/01 ~ 109/06/07	7.3 Maximum and Minimum Values	
15	109/06/08 ~ 109/06/14	7.4 Lagrange Multipliers	
16	109/06/15 ~ 109/06/21	Review	
17	109/06/22 ~ 109/06/28	Final Exam Week (Date:109/6/18-109/6/24)	
18	109/06/29 ~ 109/07/05	Supplementary teaching: Double Integrals	

Requirement	
Teaching Facility	(None)
Textbooks and Teaching Materials	Brief Applied Calculus, by Stewart and Clegg, International Edition
References	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 　　 %　 ◆ Mark of Usual： 　　 %　 ◆ Midterm Exam： 40.0 % ◆ Final Exam： 30.0 % ◆ Other〈Homework and Quizzes〉：30.0 %
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.**