Course Title	CALCULUS	Instructor	CHU, LIOU
Course Class	TQICB1A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ Required ◆ One Semester ◆ 3 Credits

Departmental Aim of Education

Cultivate professional talents in developing and applying information system in various fields.

Departmental core competences

A. Capability of computer program coding, process planning, and problem solving

B. Capability of applying basic mathematics and information technology related mathematics

C. Capability of applying knowledge of internet structure and protocol in communication
    system

D. Capability of developing information system

E. Capability of integrating information system

Course Introduction	The course gives an introductory concept of calculus with examples and application contents in order to establish foundations for advanced courses.

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I.Objective Levels (select applicable ones) :
 (i) Cognitive Domain   : C1-Remembering,   C2-Understanding,   C3-Applying,
                          C4-Analyzing,   C5-Evaluating,   C6-Creating
 (ii) Psychomotor Domain : P1-Imitation,   P2-Mechanism,   P3-Independent Operation,
                          P4-Linked Operation, P5-Automation,   P6-Origination
 (iii) Affective Domain : A1-Receiving,   A2-Responding,   A3-Valuing,
                          A4-Organizing,   A5-Charaterizing,   A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :
 (i) Determine the objective level(s) in any one of the three learning domains (cognitive,
     psychomotor, and affective) corresponding to the teaching objective. Each objective should
     correspond to the objective level(s) of ONLY ONE of the three domains.
 (ii) If more than one objective levels are applicable for each learning domain, select the
      highest one only. (For example, if the objective levels for Cognitive Domain include
      C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to
      Psychomotor Domain and Affective Domain.)
 (iii) Determine the Departmental core competences that correspond to each teaching objective.
      Each objective may correspond to one or more Departmental core competences at a time.
      (For example, if one objective corresponds to three Departmental core competences: A,AD,
      and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	(1)coordinate systems (2)function (3)differentiation (4)integration (5)application (6)course development	C4	B

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	(1)coordinate systems (2)function (3)differentiation (4)integration (5)application (6)course development	Lecture	Written test, Participation, attendance

This course has been designed to cultivate the following essential qualities in TKU students	
Essential Qualities of TKU Students	Description
◇ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◆ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◇ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◇ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◇ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◇ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◇ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	107/09/10 ~ 107/09/16	Ch 0. A Pre-calculus Review	
2	107/09/17 ~ 107/09/23	Ch 1. Functions, Graphs, and Limits	
3	107/09/24 ~ 107/09/30	Ch 2. Differentiation	
4	107/10/01 ~ 107/10/07	Ch 2. Differentiation	
5	107/10/08 ~ 107/10/14	Ch 3. Applications of the Derivative, 1st quiz.	
6	107/10/15 ~ 107/10/21	Ch 3. Applications of the Derivative	
7	107/10/22 ~ 107/10/28	Ch 4. Exponential and Logarithmic Functions	
8	107/10/29 ~ 107/11/04	Ch 4. Exponential and Logarithmic Functions	
9	107/11/05 ~ 107/11/11	Ch 4. Exponential and Logarithmic Functions	
10	107/11/12 ~ 107/11/18	Midterm Exam Week	
11	107/11/19 ~ 107/11/25	Ch 5. Integration and its Applications	
12	107/11/26 ~ 107/12/02	Ch 5. Integration and its Applications	

13	107/12/03 ~ 107/12/09	Ch 5. Integration and its Applications	
14	107/12/10 ~ 107/12/16	Ch 6. Techniques of Integration, 2nd quiz.	
15	107/12/17 ~ 107/12/23	Ch 6. Techniques of Integration	
16	107/12/24 ~ 107/12/30	Ch 7. Functions of Several Variables	
17	107/12/31 ~ 108/01/06	Ch 7. Functions of Several Variables	
18	108/01/07 ~ 108/01/13	Final Exam Week	

Requirement	1. 1. Attendance of all classes is required. 請務必出席所有課程。 2. Any absence will result in at least 5 points of "Participation" deducted. Please call me or text me before class. 病假事假扣「課堂表現」5分，請上課前通知老師。 3. Absence without leave will result in 30 points of "Participation" deducted. 曠課每次扣「課堂表現」30分。 4.Cheating or plagiarism will result in failure in the course. 作弊、抄襲會導致本課程不及格。 5. Talking, eating, using mobile phone and wearing slippers during class are not allowed, and will be expelled from the class. 上課請勿： 交談、飲食、使用行動電話，或穿著拖鞋。 以上行為因影響教師課程進行，將被要求離開教室。 6. Late arrival, early departure (over 20 minutes), and the stated inappropriate behavior will result in 30 points of "Participation" deducted. 遲到、早退 (超過20分鐘)，及前述不當行為每次扣「課堂表現」30分。
Teaching Facility	Computer, Projector
Textbook(s)	Calculus, An Applied Approach, Larson, Houghton Mifflin, 10th or the latest edition.
Reference(s)	
Number of Assignment(s)	**6** (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： % ◆ Mark of Usual：40.0 % ◆ Midterm Exam： 20.0 % ◆ Final Exam： 20.0 % ◆ Other〈Participation〉：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.**