# Tamkang University Academic Year 112, 1st Semester Course Syllabus

| Course Title | CALCULUS | Instructor | WANG, REN-HE |
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| Course Class | TLBAB1A<br>DEPARTMENT OF BANKING AND FINANCE<br>DIVISION OF GLOBAL FINANCIAL<br>MANAGEMENT (ENGLISH-TAUGHT PROGRAM), | Details | ◆ General Course<br>◆ Required<br>◆ 1st Semester |
| Relevance to SDGs | 1A<br>　SDG8　Decent work and economic growth | | |

## 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 | The course is divided into two semesters, with separate introductions to differentiation and integration. This semester will mainly introduce the definition of differential, its calculation rules, and its application in finance. |
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**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 | Introduce the definition of differential, calculation rules, and financial applications. | 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, Practicum |

Course Schedule

| Week | Date | Course Contents | Note |
|---|---|---|---|
| 1 | 112/09/11 ~ 112/09/17 | Functions, Graphs, and Limits | |
| 2 | 112/09/18 ~ 112/09/24 | Functions, Graphs, and Limits | |
| 3 | 112/09/25 ~ 112/10/01 | Functions, Graphs, and Limits | |
| 4 | 112/10/02 ~ 112/10/08 | Functions, Graphs, and Limits | |

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| 5 | 112/10/09~<br>112/10/15 | Differentiation: Basic Concepts | |
| 6 | 112/10/16~<br>112/10/22 | Differentiation: Basic Concepts | |
| 7 | 112/10/23~<br>112/10/29 | Differentiation: Basic Concepts | |
| 8 | 112/10/30~<br>112/11/05 | Differentiation: Basic Concepts | |
| 9 | 112/11/06~<br>112/11/12 | Midterm Exam Week | |
| 10 | 112/11/13~<br>112/11/19 | Additional Applications of the Derivative | |
| 11 | 112/11/20~<br>112/11/26 | Additional Applications of the Derivative | |
| 12 | 112/11/27~<br>112/12/03 | Additional Applications of the Derivative | |
| 13 | 112/12/04~<br>112/12/10 | Additional Applications of the Derivative | |
| 14 | 112/12/11~<br>112/12/17 | Exponential and Logarithmic Functions | |
| 15 | 112/12/18~<br>112/12/24 | Exponential and Logarithmic Functions | |
| 16 | 112/12/25~<br>112/12/31 | Exponential and Logarithmic Functions | |
| 17 | 113/01/01~<br>113/01/07 | Final Exam Week | |
| 18 | 113/01/08~<br>113/01/14 | Flex week, learning activities should be arranged. | |

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| Key capabilities | |
| Interdisciplinary | |
| Distinctive teaching | |
| Course Content | Logical Thinking |
| Requirement | |
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| Textbooks and Teaching Materials | Self-made teaching materials:Textbooks<br>Name of teaching materials:<br>Calculus for Business, Economics, and the Social and Life Sciences, 11th ed. Hoffmann<br>Bradley, Sobecki Price, 東華/新月出版 |
| References | |
| Grading Policy | ◆ Attendance： 10.0 % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 20.0 %<br><br>◆ Final Exam： 30.0 %<br><br>◆ Other〈TA course〉：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 .<br><br>※ **Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.** |