Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title	LINEAR ALGEBRA	Instructor	CHU, LIOU
Course Class	TEIDB2A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 2A	Details	◆ General Course ◆ Required ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

Ⅰ. Comprehend professional knowledge.

Ⅱ. Acquire mastery of Practical Skills.

Ⅲ. Establish creative achievement.

Subject Departmental core competences

A. Programming and application ability.(ratio:15.00)

B. Mathematical reasoning ability.(ratio:40.00)

C. Implementing computer systems ability.(ratio:15.00)

D. Computer networking application skills.(ratio:15.00)

E. Professional skills for information technology (IT) industry.(ratio:15.00)

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:20.00)

5. Independent thinking. (ratio:30.00)

6. A cheerful attitude and healthy lifestyle. (ratio:5.00)

7. A spirit of teamwork and dedication. (ratio:5.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

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

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	1. Linear System 2.Matrices 3.Determinant 4.Vector Space 5.Inner Product Space 6.Linear Tranformation	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDE	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	113/09/09 ~ 113/09/15	Ch 1. System of Linear Equations and Matrices	
2	113/09/16 ~ 113/09/22	Ch 2. Determinants	
3	113/09/23 ~ 113/09/29	Ch 3. Vectors in 2-Space and 3-Space	
4	113/09/30 ~ 113/10/06	Ch 3. Vectors in 2-Space and 3-Space	

5	113/10/07 ~ 113/10/13	Ch 3. Vectors in 2-Space and 3-Space	
6	113/10/14 ~ 113/10/20	Ch 4. Euclidean Vector Spaces	
7	113/10/21 ~ 113/10/27	Ch 4. Euclidean Vector Spaces	
8	113/10/28 ~ 113/11/03	Ch 4. Euclidean Vector Spaces	
9	113/11/04 ~ 113/11/10	Midterm Exam Week	
10	113/11/11 ~ 113/11/17	Ch 5. General Vector Spaces	
11	113/11/18 ~ 113/11/24	Ch 5. General Vector Spaces	
12	113/11/25 ~ 113/12/01	Ch 5. General Vector Spaces	
13	113/12/02 ~ 113/12/08	Ch 5. General Vector Spaces	
14	113/12/09 ~ 113/12/15	Ch 6. Inner Product Spaces	
15	113/12/16 ~ 113/12/22	Ch 6. Inner Product Spaces	
16	113/12/23 ~ 113/12/29	Ch 6. Inner Product Spaces	
17	113/12/30 ~ 114/01/05	Final Exam Week	
18	114/01/06 ~ 114/01/12	Flex week, learning activities should be arranged.	

Key capabilities	
Interdisciplinary	
Distinctive teaching	
Course Content	Logical Thinking

Requirement	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 and performance" 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 and performance" 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 and performance" 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。 7. There will be at least 2 assignments and 4 quizzes.
Textbooks and Teaching Materials	Self-made teaching materials:Presentations, Handouts, Worksheets Using teaching materials from other writers:Textbooks, Presentations
References	
Grading Policy	◆ Attendance： 20.0 % ◆ Mark of Usual： % ◆ Midterm Exam： 20.0 % ◆ Final Exam： 20.0 % ◆ Other〈Performance〉：40.0 %
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.**