Tamkang University Academic Year 107, 2nd Semester Course Syllabus

Course Title	RESEARCH METHODOLOGY	Instructor	CHEN, CHIEN-CHANG
Course Class	TEIBM1A MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ Required ◆ 2nd Semester ◆ 1 Credits

Departmental Aim of Education

Ⅰ. Cultivate the ability to conduct independent research and problem solving.

Ⅱ. Strengthen creativity and research capacity.

Ⅲ. Build profound professional knowledge in computer science and information engineering.

Ⅳ. Engage in self-directed lifelong learning.

Departmental core competences

A. Independent problem solving ability.

B. Independent innovative thinking ability.

C. Research paper writing and presentation ability.

D. Research & development (R&D) ability in information engineering.

E. Project execution and control ability.

F. Lifelong self-directed learning ability.

Course Introduction	This course introduces the basics of research methodology, including search and study of research papers. Various research talks given by invited speakers are also arranged to present to the students recent research trends.

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	Understand the basic concepts of research	C2	CD
2	Get familiar with paper search	C3	CD
3	Learn the techniques of English paper study	C4	CD
4	Understand various research topics and trends	C5	D

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	Understand the basic concepts of research	Lecture, Discussion	Report, Participation
2	Get familiar with paper search	Lecture, Discussion, Practicum	Practicum, Participation
3	Learn the techniques of English paper study	Lecture, Discussion, Appreciation, Practicum	Practicum, Participation
4	Understand various research topics and trends	Lecture, Discussion	Participation

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	108/02/18 ~ 108/02/24	Introduction	
2	108/02/25 ~ 108/03/03	Research talk	
3	108/03/04 ~ 108/03/10	Research talk	
4	108/03/11 ~ 108/03/17	Research talk	
5	108/03/18 ~ 108/03/24	Research talk	
6	108/03/25 ~ 108/03/31	Research talk	
7	108/04/01 ~ 108/04/07	Research talk	
8	108/04/08 ~ 108/04/14	Research talk	
9	108/04/15 ~ 108/04/21	Reserach talk	
10	108/04/22 ~ 108/04/28	Research talk	
11	108/04/29 ~ 108/05/05	Reserach talk	
12	108/05/06 ~ 108/05/12	Reserach talk	

13	108/05/13 ~ 108/05/19	Reserach talk	
14	108/05/20 ~ 108/05/26	Reserach talk	
15	108/05/27 ~ 108/06/02	Student short presentations	
16	108/06/03 ~ 108/06/09	Student short presentations	
17	108/06/10 ~ 108/06/16	Student short presentations	
18	108/06/17 ~ 108/06/23	Student short presentations	

Requirement	
Teaching Facility	(None)
Textbook(s)	papers from IEEExplorer and Elsevier Digital Library
Reference(s)	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 20.0 % ◆ Mark of Usual：60.0 % ◆ Midterm Exam： % ◆ Final Exam： 20.0 % ◆ Other〈 〉： %
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.**