

Tamkang University Academic Year 103, 1st Semester Course Syllabus

Course Title	RESEARCH METHODOLOGY	Instructor	HSU HUI-HUANG
Course Class	TEIBM1A ENGLISH MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING, 1A	Details	◆ Required ◆ 1st Semester ◆ 1 Credits
D e p a r t m e n t a l A i m o f E d u c a t i o n			
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.			
D e p a r t m e n t a l c o r e c o m p e t e n c e s			
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-Characterizing, 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	ABCDEF
2	Get familiar with paper search	C3	ABCDEF
3	Learn the techniques of English paper study	C4	ABCDEF
4	Understand various research topics and trends	C5	ABCDEF

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	103/09/15 ~ 103/09/21	Introduction	
2	103/09/22 ~ 103/09/28	Electronic library and paper search	
3	103/09/29 ~ 103/10/05	Electronic library and paper search	
4	103/10/06 ~ 103/10/12	English paper study	
5	103/10/13 ~ 103/10/19	Introduction to research topics	
6	103/10/20 ~ 103/10/26	Research talk	
7	103/10/27 ~ 103/11/02	Research talk	
8	103/11/03 ~ 103/11/09	Research talk	
9	103/11/10 ~ 103/11/16	Research talk	
10	103/11/17 ~ 103/11/23	Group discussion	
11	103/11/24 ~ 103/11/30	Research talk	
12	103/12/01 ~ 103/12/07	Research talk	

13	103/12/08 ~ 103/12/14	Research talk	
14	103/12/15 ~ 103/12/21	Research talk	
15	103/12/22 ~ 103/12/28	Student presentations	
16	103/12/29 ~ 104/01/04	Student presentations	
17	104/01/05 ~ 104/01/11	Student presentations	
18	104/01/12 ~ 104/01/18	Student presentations	
Requirement			
Teaching Facility		Computer, Projector	
Textbook(s)		Papers from IEEEExplorer and ACM 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.	