

Tamkang University Academic Year 110, 1st Semester Course Syllabus

Course Title	RESEARCH METHODOLOGY	Instructor	
Course Class	TEIBM1A MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM),	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ 1st Semester
Relevance to SDGs	1A SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		
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.			
Subject Departmental core competences			
B. Independent innovative thinking ability.(ratio:30.00) D. Research & development (R&D) ability in information engineering.(ratio:70.00)			
Subject Schoolwide essential virtues			
2. Information literacy. (ratio:70.00) 5. Independent thinking. (ratio:30.00)			
Course Introduction	This course introduces the procedure of a complete research. We fill focus on how a research problem is found, how to read related papers, how to define the problem, how to design and analyze the algorithms, how to evaluate the performances, how to write the academic reports, and finally how to present your researches.		

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	This course introduces the research methodology in computer science. Students are expected to understand the procedure of making a research in this course.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	BD	25	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	110/09/22 ~ 110/09/28	Introduction to this course and definition of RESEARCH	
2	110/09/29 ~ 110/10/05	Academic Integrity	
3	110/10/06 ~ 110/10/12	Use of digital library	
4	110/10/13 ~ 110/10/19	How to READ and EVALUATE a research paper	
5	110/10/20 ~ 110/10/26	Make your own RESEARCH NOTES	
6	110/10/27 ~ 110/11/02	Find a research PROBLEM and define your CONTRIBUTION	
7	110/11/03 ~ 110/11/09	Solve the problem: Mathematic tools	
8	110/11/10 ~ 110/11/16	Solve the problem: Simulation/Programming tools	
9	110/11/17 ~ 110/11/23	Solve the problem: Empirical Studies	
10	110/11/24 ~ 110/11/30	EVALUATE your methods	

11	110/12/01 ~ 110/12/07	Technical WRITING (I)	
12	110/12/08 ~ 110/12/14	Technical WRITING (II) : Introduction to LaTeX tool	LaTeX
13	110/12/15 ~ 110/12/21	PUBLISH your works	
14	110/12/22 ~ 110/12/28	Protect your works	
15	110/12/29 ~ 111/01/04	Paper Presentation and Discussion	
16	111/01/05 ~ 111/01/11	Paper Presentation and Discussion	
17	111/01/12 ~ 111/01/18	Paper Presentation and Discussion	
18	111/01/19 ~ 111/01/25	Paper Presentation and Discussion	
Requirement	<p>Students are required to present their researches in the end of this semester.</p> <p>Additional materials of this course: http://wiki.yichengtech.tw/doku.php?id=courses:researchmethodology:rm2021fe</p>		
Teaching Facility	(None)		
Textbooks and Teaching Materials	We will provide related materials along the progress of this course.		
References	Materials will be provided during the class.		
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	<p>◆ Attendance : 30.0 % ◆ Mark of Usual : % ◆ Midterm Exam : %</p> <p>◆ Final Exam : 30.0 %</p> <p>◆ Other (Research notes) : 40.0 %</p>		
Note	<p>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.</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>		