

Tamkang University Academic Year 109, 2nd Semester Course Syllabus

Course Title	RESEARCH METHODOLOGY	Instructor	CHUANG-CHIEH LIN
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 ◆ 2nd Semester
Relevance to SDGs	1A SDG4 Quality education		
Departmental Aim of Education			
<p>I. Cultivate the ability to conduct independent research and problem solving.</p> <p>II. Strengthen creativity and research capacity.</p> <p>III. Build profound professional knowledge in computer science and information engineering.</p> <p>IV. Engage in self-directed lifelong learning.</p>			
Subject Departmental core competences			
<p>B. Independent innovative thinking ability.(ratio:30.00)</p> <p>D. Research & development (R&D) ability in information engineering.(ratio:70.00)</p>			
Subject Schoolwide essential virtues			
<p>2. Information literacy. (ratio:70.00)</p> <p>5. Independent thinking. (ratio:30.00)</p>			
Course Introduction	<p>This course focuses on developing researching and writing skills in Computer Science. Here we investigate, in general, the principles and approaches of conducting a research project.</p> <p>We expect the students to acquire various aspects of reading, writing, evaluating papers, and presenting research.</p>		

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	Types of Research	Cognitive
2	Literature Survey	Psychomotor
3	Research Design	Psychomotor
4	Collaboration	Cognitive
5	Writing Strategies	Psychomotor
6	Data Collection and Visualization	Psychomotor
7	Review Processes	Psychomotor
8	Report and Proposal	Psychomotor

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), Attendance
2	BD	25	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online)
3	BD	25	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online)
4	BD	25	Lecture, Discussion	Discussion(including classroom and online)
5	BD	25	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online)
6	BD	25	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online), Report(including oral and written)

7	BD	25	Lecture, Discussion, Practicum	Discussion(including classroom and online), Report(including oral and written)
8	BD	25	Discussion, Practicum	Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	110/02/22 ~ 110/02/28	Course Introduction	
2	110/03/01 ~ 110/03/07	Types of Research	
3	110/03/08 ~ 110/03/14	Types of Research	
4	110/03/15 ~ 110/03/21	Literature Survey	
5	110/03/22 ~ 110/03/28	Literature Survey	
6	110/03/29 ~ 110/04/04	Research Design	
7	110/04/05 ~ 110/04/11	Research Design	
8	110/04/12 ~ 110/04/18	Research Design	
9	110/04/19 ~ 110/04/25	Collaboration	
10	110/04/26 ~ 110/05/02	Writing Strategies	
11	110/05/03 ~ 110/05/09	Writing Strategies	
12	110/05/10 ~ 110/05/16	Data Collection and Visualization	
13	110/05/17 ~ 110/05/23	Data Collection and Visualization	
14	110/05/24 ~ 110/05/30	Data Collection and Visualization	
15	110/05/31 ~ 110/06/06	Review Processes	
16	110/06/07 ~ 110/06/13	Review Processes	
17	110/06/14 ~ 110/06/20	Report and Proposal	
18	110/06/21 ~ 110/06/27	Report and Proposal	

Requirement

Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Research Design - Qualitative, Quantitative, and Mixed Methods Approaches. 5th Edition. John W. Creswell and J. David Creswell. SAGE Publications, Inc. 2017.
References	Research Methodology - A Step-By-Step Guide For Beginners. 3rd Edition. Ranjit Kumar. SAGE. 2019.
Number of Assignment(s)	5 (Filled in by assignment instructor only)
Grading Policy	<ul style="list-style-type: none"> ◆ Attendance : 20.0 % ◆ Mark of Usual : 40.0 % ◆ Midterm Exam : % ◆ Final Exam : % ◆ Other 〈Final Report〉 : 40.0 %
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>