

## Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	RESEARCH METHOD (I)	Instructor	JUANG, CHIA-WEI
Course Class	TEBXM1A MASTER'S PROGRAM, DEPARTMENT OF MECHANICAL AND ELECTRO-MECHANICAL ENGINEERING, 1A	Details	◆ General Course ◆ Required ◆ One Semester ◆ 1 Credits
Relevance to SDGs	SDG4 Quality education		
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 . To prepare students who have a comprehensive understanding of the principles of applied sciences and engineering to be innovators in the field of mechanical and electromechanical engineering. II. To train emerging professionals who possess a high level of expertise and ethical standards who will become independent research and development leaders in the industry. III. To motivate students who will pursue continuing education as a means to stay on the cutting edge of global competitiveness and meet changes in their careers and the workplace with confidence and ease.			
Subject Departmental core competences			
A. Head: Knowledge of mechanical and electromechanical engineering.(ratio:50.00) B. Hand: Hands-on skills and practical realization.(ratio:10.00) C. Heart: Love of learning and innovation.(ratio:20.00) D. Eye: Vision of progress and improvements.(ratio:20.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:20.00) 2. Information literacy. (ratio:20.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:5.00) 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 objective of this course is to teach students to do successful scientific and engineering research. In the beginning, one should learn to know the meaning and value of research. Then one should recognize the various research methods. A good research topic, plan, and executing steps are absolutely required for a successful academic thesis. During this course, several scholars and experts are invited to share research experiences to the students.			
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	Students may be able to read research articles and collect research information. Students may understand various research methods.			Cognitive
The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment				
No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCD	12345678	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written)
Course Schedule				
Week	Date	Course Contents		Note
1	114/09/15 ~ 114/09/21	Course Introduction		
2	114/09/22 ~ 114/09/28	Academic Ethics I		
3	114/09/29 ~ 114/10/05	Academic Ethics II		
4	114/10/06 ~ 114/10/12	How to Search for Journals		
5	114/10/13 ~ 114/10/19	How to Study Journals		

6	114/10/20 ~ 114/10/26	How to Conduct Experiments	
7	114/10/27 ~ 114/11/02	How to Presentation	
8	114/11/03 ~ 114/11/09	Presentation	
9	114/11/10 ~ 114/11/16	Presentation	
10	114/11/17 ~ 114/11/23	Presentation	
11	114/11/24 ~ 114/11/30	Presentation	
12	114/12/01 ~ 114/12/07	Presentation	
13	114/12/08 ~ 114/12/14	Presentation	
14	114/12/15 ~ 114/12/21	Presentation	
15	114/12/22 ~ 114/12/28	Presentation	
16	114/12/29 ~ 115/01/04	Presentation	
17	115/01/05 ~ 115/01/11	Presentation	
18	115/01/12 ~ 115/01/18	Presentation	
Key capabilities		self-directed learning Problem solving	
Interdisciplinary			
Distinctive teaching			
Course Content		Logical Thinking	
Requirement			

Textbooks and Teaching Materials	Self-made teaching materials:Handouts
References	
Grading Policy	<p>◆ Attendance : 10.0 %    ◆ Mark of Usual : 40.0 %    ◆ Midterm Exam : %</p> <p>◆ Final Exam : 50.0 %</p> <p>◆ Other ( ) : %</p>
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="https://web2.ais.tku.edu.tw/csp">https://web2.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a>.</p> <p>※"Adhere to the concept of intellectual property rights" and "Do not illegally photocopy, download, or distribute." Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>