

## Tamkang University Academic Year 109, 2nd Semester Course Syllabus

Course Title	SEMINAR (IV)	Instructor	CHAO CHOUNG-LII
Course Class	TEBXD2A DOCTORAL PROGRAM, DEPARTMENT OF MECHANICAL AND ELECTRO-MECHANICAL ENGINEERING, 2A	Details	<ul style="list-style-type: none"> <li>◆ General Course</li> <li>◆ Required</li> <li>◆ One Semester</li> </ul>
Relevance to SDGs	SDG9 Industry, Innovation, and Infrastructure		
Departmental Aim of Education			
<p>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.</p> <p>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.</p> <p>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.</p>			
Subject Departmental core competences			
<p>A. Head: Knowledge of mechanical and electromechanical engineering.(ratio:60.00)</p> <p>C. Heart: Love of learning and innovation.(ratio:20.00)</p> <p>D. Eye: Vision of progress and improvements.(ratio:20.00)</p>			
Subject Schoolwide essential virtues			
<p>1. A global perspective. (ratio:20.00)</p> <p>2. Information literacy. (ratio:50.00)</p> <p>5. Independent thinking. (ratio:30.00)</p>			

Course Introduction	This course aims to help students learn how to think up an idea for research, collect/organize the related information, decide on a research method, execute the problem solving process, analyze data and write up/publish results by studying, analyzing and discussing the related research papers, books and patents.
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**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	Think up an idea to research, write a research proposal and collect/organize the related information.	Cognitive
2	To decide on a research method, execute the problem solving process	Cognitive
3	To analyze data and write up/publish results	Cognitive
4	To explore and learn the motivation of scientific and engineering research	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	AD	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
2	ACD	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)

3	AD	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)
4	AC	12	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online)

### Course Schedule

Week	Date	Course Contents	Note
1	110/02/22 ~ 110/02/28	Introduction	
2	110/03/01 ~ 110/03/07	Papers reading, analyzing and discussion	
3	110/03/08 ~ 110/03/14	Papers reading, analyzing and discussion	
4	110/03/15 ~ 110/03/21	Papers reading, analyzing and discussion	
5	110/03/22 ~ 110/03/28	Papers reading, analyzing and discussion	
6	110/03/29 ~ 110/04/04	Papers reading, analyzing and discussion	
7	110/04/05 ~ 110/04/11	Papers reading, analyzing and discussion	
8	110/04/12 ~ 110/04/18	Papers reading, analyzing and discussion	
9	110/04/19 ~ 110/04/25	Papers reading, analyzing and discussion	
10	110/04/26 ~ 110/05/02	Midterm Report	
11	110/05/03 ~ 110/05/09	Papers reading, analyzing and discussion	
12	110/05/10 ~ 110/05/16	Papers reading, analyzing and discussion	
13	110/05/17 ~ 110/05/23	Papers reading, analyzing and discussion	
14	110/05/24 ~ 110/05/30	Papers reading, analyzing and discussion	
15	110/05/31 ~ 110/06/06	Papers reading, analyzing and discussion	
16	110/06/07 ~ 110/06/13	Final Report/Presentation/Group Discussion	
17	110/06/14 ~ 110/06/20	Final Report/Presentation/Group Discussion	
18	110/06/21 ~ 110/06/27	Final Report/Presentation/Group Discussion	

Requirement

Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	The selected research papers, books and patents
References	The selected research papers, books and patents
Number of Assignment(s)	12 (Filled in by assignment instructor only)
Grading Policy	<p>◆ Attendance : 15.0 %   ◆ Mark of Usual : 15.0 %   ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : %</p> <p>◆ Other (FinalReport/Present. ) : 40.0 %</p>
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.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><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p>