

Tamkang University Academic Year 2012, 2nd Semester  
Course Syllabus

Course Title	Seminar (IV)	Instructor	Yang, Lung-Jieh
Department/Year/Class		Course Details	
Mechanical & Electromechanical Engineering /2012/Doctor program	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Selective	<input checked="" type="checkbox"/> 0 ( One Semester ) <input type="checkbox"/> 1 ( 1st Semester ) <input type="checkbox"/> 2 ( 2nd Semester ) <input type="checkbox"/> 3 ( 3rd Semester )	Credits 1 Credit
Aim of Education		Core Competences	
<ol style="list-style-type: none"> <li>1. 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.</li> <li>2. 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.</li> <li>3. 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.</li> </ol>		<ol style="list-style-type: none"> <li>A. Head: Knowledge of mechanical and electromechanical engineering</li> <li>B. Hand: Hands-on skills and practical realization</li> <li>C. Heart: Love of learning and innovation</li> <li>D. Eye: Vision of progress and improvements</li> </ol>	
<b>Course Introduction (50 to 100 words)</b>	This course aims to train students in strengthening the critical thinking and problem solving skills in the specific topics of mechanical and electromechanical engineering. The contents of this course include information retrieval, reading and commenting on the specific topics, building up the research tree, oral presentation, and technical manuscript writing.		

## The Relevance among Teaching Objectives, Objective Levels and 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 Charaterizing · A6 Implementing**

### II. The Relevance among Teaching Objectives, Objective Levels and Core Competences :

- (I) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objectives. 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 core competences that correspond to each teaching objective. Each objective may correspond to one or more core competences at a time. (For example, if one objective corresponds to three core competences: A, AD, and BEF, list all of the three in the box.)

Teaching objectives	Relevance	
	Objective Levels	Core Competences
1. To train students in strengthening the critical thinking skill in the topics of mechanical and electromechanical engineering.	C4	ABC
2. To train students in strengthening the problem solving skill in the topics of mechanical and electromechanical engineering.	C5	ABC
3. To train students in strengthening the presentation skill in the topics of mechanical and electromechanical engineering.	P3	ABC
4		
5		
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### Teaching Objectives, Teaching Methods and Assessment

Teaching Objectives	Teaching Methods	Assessment
1. To train students in strengthening the critical thinking skill in the topics of mechanical and electromechanical engineering.	Lecture and discussion	Report, absence
2. To train students in strengthening the problem solving skill in the topics of mechanical and electromechanical engineering.	Lecture and discussion	Report, absence

3. To train students in strengthening the presentation skill in the topics of mechanical and electromechanical engineering.	Lecture and discussion	Report, absence

This course has been designed to cultivate the following essential qualities in TKU students.

Essential Qualities of TKU Students	Description
■ global perspectives	See the course scope & schedule.
■ a vision for the future	See the course scope & schedule.
■ information literacy	See the course scope & schedule.
■ ethical and moral principles	Through obeying the rules of exams.
■ independent thinking	Through the preparation of the term presentation.
■ an awareness of healthy living	Encourage Q&A from students in class.
■ effective teamwork	Interact with other guys in the discussion session.
■ an appreciation of the arts	Through the preparation of the ppt for presentation.

#### Course Schedule

Week	Date	Subject/Topics	Note
1		Paper survey, paper reading, report and discussion	
2		Paper survey, paper reading, report and discussion	
3		Paper survey, paper reading, report and discussion	
4		Paper survey, paper reading, report and discussion	
5		Paper survey, paper reading, report and discussion	
6		Paper survey, paper reading, report and discussion	
7		Paper survey, paper reading, report and discussion	
8		Paper survey, paper reading, report and discussion	
9		Paper survey, paper reading, report and discussion	
10		Midterm Exam Week	
11		Paper survey, paper reading, report and discussion	
12		Paper survey, paper reading, report and discussion	
13		Paper survey, paper reading, report and discussion	
14		Paper survey, paper reading, report and discussion	
15		Paper survey, paper reading, report and discussion	
16		Paper survey, paper reading, report and discussion	
17		Paper survey, paper reading, report and discussion	
18		Final Exam Week	

Requirement	<p>1. According to the rule of Tamkang University, one who is absent beyond 1/3 of the whole class time is not allowed for attending the final exam. One time of absence at any roll call will lose you 2 scores.</p> <p>2. Each guy is scheduled to give an oral presentation of 30 min and they should hand in one integrated paper report at the final. The title and the content of the presentation should be discussed with Professor Yang in advance.</p>
Teaching Facility	<input checked="" type="checkbox"/> Computer <input checked="" type="checkbox"/> Overhead Projector <input type="checkbox"/> Other ( _____ )
Textbook(s)	Provided by the professor.
Suggested Readings	No English textbook but you can download all the PPT files at the website- -> <a href="http://tsp.ec.tku.edu.tw/QuickPlace/ljyang/Main.nsf/h_Toc/36EE6A7F4538CB5E48256DD80016CA67/?OpenDocument">http://tsp.ec.tku.edu.tw/QuickPlace/ljyang/Main.nsf/h_Toc/36EE6A7F4538CB5E48256DD80016CA67/?OpenDocument</a>
Number of Assignment(s)	Filled in only for those courses that apply
Grading Policy	<p>◆ Class attending : 50.0 %</p> <p>◆ Term presentation : 50.0 %</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/index.asp">http://www.acad.tku.edu.tw/index.asp</a>.</p> <p><b>※Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p>

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