

Tamkang University Academic Year 111, 1st Semester Course Syllabus

Course Title	THE WAY SCIENCE WORKS	Instructor	CHUNG-LI DONG
Course Class	TNUUB0A NATURAL SCIENCES, 0A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG7 Affordable and clean energy SDG13 Climate action		
Departmental Aim of Education			
By exploring natural laws and studying scientific methods, to let students understand the impact of science and technology on human life, and to cultivate in them the ability to think independently, and to discover, analyse and solve problems. Also, throu.			
Subject Schoolwide essential virtues			
<ol style="list-style-type: none"> 1. A global perspective. (ratio:5.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:25.00) 4. Moral integrity. (ratio:5.00) 5. Independent thinking. (ratio:5.00) 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:20.00) 			
Course Introduction	You do not have to be a scientist, but you should know basic science concepts and terminology. This course will introduce the emerging topics in science and technology. The fundamentals and significance of energy, energy sources, and energy science. Further, it acquaints the basics of energy materials and their types such as energy storage, especially capacitors and batteries, energy conversion, and energy saving.		

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	We will look at some basic science & technology concepts and how they can be applied to climate change which is the biggest challenge of our future.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1		12345678	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	111/09/05 ~ 111/09/11	Introduction	
2	111/09/12 ~ 111/09/18	Overview of energy and why energy science	
3	111/09/19 ~ 111/09/25	Energy storage science and technology-I	
4	111/09/26 ~ 111/10/02	Energy storage science and technology-II	
5	111/10/03 ~ 111/10/09	Science Movie-1	
6	111/10/10 ~ 111/10/16	Energy conversion science and technology-I	
7	111/10/17 ~ 111/10/23	Energy conversion science and technology-II	
8	111/10/24 ~ 111/10/30	Energy conversion science and technology-III	
9	111/10/31 ~ 111/11/06	Science Movie-2	
10	111/11/07 ~ 111/11/13	Midterm Exam Week	
11	111/11/14 ~ 111/11/20	Energy saving science and technology-I	

12	111/11/21 ~ 111/11/27	Energy saving science and technology-II	
13	111/11/28 ~ 111/12/04	Science Movie-3	
14	111/12/05 ~ 111/12/11	Report-I	
15	111/12/12 ~ 111/12/18	Report-II	
16	111/12/19 ~ 111/12/25	Report-III	
17	111/12/26 ~ 112/01/01	Summary	
18	112/01/02 ~ 112/01/08	Final Exam Week	
Requirement			
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials			
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : % ◆ Final Exam : % ◆ Other 〈Final Report〉 : 90.0 %		
Note	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 . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.		