

## Tamkang University Academic Year 108, 1st Semester Course Syllabus

Course Title	THE WAY SCIENCE WORKS	Instructor	LEE, MING-HSIEN
Course Class	TNUUB0A NATURAL SCIENCES, 0A	Details	<ul style="list-style-type: none"> <li>◆ General Course</li> <li>◆ Required</li> <li>◆ One Semester</li> </ul>
<b>A c a d e m i c   A i m   o f   E d u c a t i o n</b>			
<p>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.</p>			
Subject Schoolwide essential virtues			
<p>2. Information literacy. (ratio:50.00)</p> <p>3. A vision for the future. (ratio:30.00)</p> <p>8. A sense of aesthetic appreciation. (ratio:20.00)</p>			
Course Introduction	<p>Using easy-to-understand stories and pictures, this course explain to students the science principles and mechanism behind the everyday used technologies and products. This course is most relevant to "How Thing Works" types of knowledge.</p>		
<p><b>The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.</b></p>			
<p>Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.</p> <p>I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.</p> <p>II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.</p> <p>III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.</p>			
No.	Teaching Objectives	objective methods	

1	Understand basic principles behind technologies.			Cognitive
The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment				
No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1		238	Lecture	Testing, Discussion(including classroom and online)
Course Schedule				
Week	Date	Course Contents		Note
1	108/09/09 ~ 108/09/15	Course Introduction		
2	108/09/16 ~ 108/09/22	How science works for urban and environmental technologies (1)		
3	108/09/23 ~ 108/09/29	How science works for urban and environmental technologies (2)		
4	108/09/30 ~ 108/10/06	How science works for urban and environmental technologies (3)		
5	108/10/07 ~ 108/10/13	How science works for domestic living technologies (1)		
6	108/10/14 ~ 108/10/20	How science works for domestic living technologies (2)		
7	108/10/21 ~ 108/10/27	How science works for audio / visual technologies (1)		
8	108/10/28 ~ 108/11/03	How science works for audio / visual technologies (2)		
9	108/11/04 ~ 108/11/10	How science works for computer and microchip technologies (1)		
10	108/11/11 ~ 108/11/17	Midterm Exam Week		
11	108/11/18 ~ 108/11/24	Mid-term exam answer announcement and re-mark		
12	108/11/25 ~ 108/12/01	How science works for computer and microchip technologies (2)		
13	108/12/02 ~ 108/12/08	How science works for communication technologies (1)		
14	108/12/09 ~ 108/12/15	How science works for communication technologies (2)		
15	108/12/16 ~ 108/12/22	How science works for consumer electronic technologies (1)		
16	108/12/23 ~ 108/12/29	How science works for consumer electronic technologies (2)		

17	108/12/30~ 109/01/05	How science works for office automation technologies	
18	109/01/06~ 109/01/12	Final Exam Week (Date:109/1/3-109/1/9)	
Requirement	No food and drink during the class.		
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials	書名 : The Way Science Works, 出版社 : Macmillan, USA : ISBN 0-02-860822-4 書名 : (Scientific American) How Things Work Today, 出版社 : Universal International Pty. Ltd., ISBN: 1-876670-15-0		
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance :           %   ◆ Mark of Usual :           %   ◆ Midterm Exam : 50.0 % ◆ Final Exam :   50.0 % ◆ Other < > :           %		
Note	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> . <b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b>		