

Tamkang University Academic Year 110, 1st Semester Course Syllabus

Course Title	A VOYAGE TO SCIENCE	Instructor	WU, JUNYI
Course Class	TNUUB0B NATURAL SCIENCES, 0B	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG4 Quality education		
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			
1. A global perspective. (ratio:50.00) 5. Independent thinking. (ratio:50.00)			
Course Introduction	<p>Science is not just about nature. It is a dialog between human beings and nature. Motivated by curiosity, scientists have been asking their questions to nature in their way, i.e. experiments, and interpret the answer of nature with their theory. In this course, one will see how our scientific view of nature has been built up through the whole history of human beings. Such a historical review of the scientific principle will then help us to understand the current development of science and technology, and foresee their future.</p>		

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	Understand the scientific principle	Cognitive
2	Understand the current science and technology	Affective

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1		15	Lecture, Discussion	Report(including oral and written)
2		15	Lecture, Discussion	Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	110/09/22 ~ 110/09/28	Aristotle: "What exactly is the FINAL CAUSE of this course?"	This syllabus is subject to changes.
2	110/09/29 ~ 110/10/05	Euclid, Alhazen and Brunelleschi: "See, that is what I SAW."	
3	110/10/06 ~ 110/10/12	Twinkle, twinkle, little star, how I wonder WHEN we are?	
4	110/10/13 ~ 110/10/19	Twinkle, twinkle, little star, how I wonder WHERE we are? -- Copernicus, Tycho and Kepler	
5	110/10/20 ~ 110/10/26	Galileo, Leibniz and Newton: "May the FORCE be with you!"	
6	110/10/27 ~ 110/11/02	Newton and Huygens: "Let us shed some light on the LIGHT."	
7	110/11/03 ~ 110/11/09	Industry: "It is time to take a revolutionary bath in THERMODYNAMICS."	
8	110/11/10 ~ 110/11/16	Let's put the "E" and "M" together -- Coulomb, Ampere, Faraday and Maxwell	

9	110/11/17 ~ 110/11/23	Midterm Exam Week	
10	110/11/24 ~ 110/11/30	The current war for "POWER": Edison vs. Tesla	
11	110/12/01 ~ 110/12/07	Einstein: "Oops, my watch is RELATIVELY slow!"	
12	110/12/08 ~ 110/12/14	Sport time: the LIVE golf on the moon.	
13	110/12/15 ~ 110/12/21	One, two, three and four, am I counting the "QUANTUM"? Probably!	
14	110/12/22 ~ 110/12/28	"Ketchup or Mayo?" "No, SEMICONDUCTORs on chips, please!"	
15	110/12/29 ~ 111/01/04	Turing and Shannon: "start a new world with only 0 and 1 [Enter]"	
16	111/01/05 ~ 111/01/11	When QUANTUM met COMPUTER, we entered the future.	
17	111/01/12 ~ 111/01/18	Final Exam Week	
18	111/01/19 ~ 111/01/25		
Requirement	Curiosity		
Teaching Facility	Computer, Other (Whiteboard/Blackboard)		
Textbooks and Teaching Materials	The slides of the lecture will be shared online.		
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : % ◆ Final Exam : 40.0 % ◆ Other <Written report> : 40.0 %		
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.		