

Tamkang University Academic Year 110, 2nd 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 interpreting the answer of nature with their theory.</p> <p>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	111/02/21 ~ 111/02/25	Aristotle: "What exactly is the FINAL CAUSE of this course?"	This syllabus is subject to changes.
2	111/02/28 ~ 111/03/04	"See, that is what I SAW" -- Euclid, Alhazen and Brunelleschi	
3	111/03/07 ~ 111/03/11	Twinkle, twinkle, little star, how I wonder WHEN we are?	
4	111/03/14 ~ 111/03/18	Twinkle, twinkle, little star, how I wonder WHERE we are? -- Copernicus, Tycho and Kepler	
5	111/03/21 ~ 111/03/25	"May the FORCE be with you!" - Galileo, Leibniz and Newton	
6	111/03/28 ~ 111/04/01	"Let us shed some light on the LIGHT." -- Newton and Huygens	
7	111/04/04 ~ 111/04/08	A revolutionary bath in THERMODYNAMICS.	
8	111/04/11 ~ 111/04/15	And God said "E+M" -- Coulomb, Ampere, Faraday and Maxwell	

9	111/04/18 ~ 111/04/22	A war for POWER: the current war -- Edison v.s. Tesla	
10	111/04/25 ~ 111/04/29	Midterm Exam Week	
11	111/05/02 ~ 111/05/06	"Oops, my watch is RELATIVELY slow!" -- Einstein	
12	111/05/09 ~ 111/05/13	Sport time: the LIVE golf on the moon.	
13	111/05/16 ~ 111/05/20	A new grammar: QUATNUM	
14	111/05/23 ~ 111/05/27	"It is time for a game, the imitation game." -- Alan Turing	
15	111/05/30 ~ 111/06/03	"Ketchup or Mayo?" "No, SEMICONDUCTORs on chips, please!"	
16	111/06/06 ~ 111/06/10	Computing in the quantum world.	
17	111/06/13 ~ 111/06/17	Quantum Information and the future	
18	111/06/20 ~ 111/06/24	Final Exam Week	
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 : 15.0 % ◆ Mark of Usual : 25.0 % ◆ Midterm Exam : % ◆ Final Exam : 30.0 % ◆ Other <Written report> : 30.0 %		
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.		