Tamkang University Academic Year 108, 2nd Semester Course Syllabus

Course Title	EVOLUTION OF TECHNOLOGIES	Instructor	LEE, MING-HSIEN
Course Class	TNUZB0A GLOBAL TECHNOLOGY REVOLUTION, 0A	Details	◆ General Course ◆ Required ◆ One Semester

Academic Aim of Education

Students will understand recent development of modern science and technology and its impact on human society and global environment. Through the design of course students will also be familiar with broadly-based fundamental technical knowledge and improve.

Subject Schoolwide essential virtues

1. A global perspective. (ratio:70.00)
2. Information literacy. (ratio:10.00)
3. A vision for the future. (ratio:20.00)

Course Introduction	Introduce the content and influence of quantum, computer and bio-molecular revolutions. This will help us understand and reflect our roles during the development of technologies related to matter, mind, and life.

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 achievement of matter, mind, and life as well as how human master them.	Cognitive
2	To know the future of science and technology	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1		123	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written)
2		3	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	109/03/02 ~ 109/03/08	Introduction to the course	
2	109/03/09 ~ 109/03/15	Prolog -- Choreographer of Matter, Life and Intelligence	
3	109/03/16 ~ 109/03/22	Computer Revolution ; Visions 1 and Discussion	
4	109/03/23 ~ 109/03/29	Film watching and discussion : The 13th Floor	
5	109/03/30 ~ 109/04/05	Bio-molecular Revolution : Vision 2 and discussion	
6	109/04/06 ~ 109/04/12	DNA : (1) ; Genetic Code, Nuclear Acid and Proteins	
7	109/04/13 ~ 109/04/19	DNA (2) Cancer, (3) Personality	
8	109/04/20 ~ 109/04/26	DNA Sequencing ; DNA (3) Aging and Death	
9	109/04/27 ~ 109/05/03	Midterm Exam Week	
10	109/05/04 ~ 109/05/10	DNA (5) The Origin of Mankind ; (6) The Future of DNA	
11	109/05/11 ~ 109/05/17	Distribute mid-term exam papers and score correction	
12	109/05/18 ~ 109/05/24	Quantum Revolution ; Vision 3 and discussion	
13	109/05/25 ~ 109/05/31	Discovering Quanta : Photon, Atom, Energy and Materials, Laser and Superconductivity	
14	109/06/01 ~ 109/06/07	Nano-technology : Why and How	

15	109/06/08～ 109/06/14	Environmental Issues : Film watching	
16	109/06/15～ 109/06/21	Film Watching : Deep Impact	
17	109/06/22～ 109/06/28	Final Exam Week (Date:109/6/18-109/6/24)	
18	109/06/29～ 109/07/05	Supplementary teaching: Energy Crisis, Civilization, Search for a Planet and Future	

Requirement	Course Website __ http://boson4.phys.tku.edu.tw
Teaching Facility	Computer, Projector, Other (Internet)
Textbooks and Teaching Materials	Visions, by M. Kaku (e-book is available from TKU library through campus IP)
References	NEXT 20 Year and After（大塊文化）<Traditional Chinese Text>, more info on http://boson4.phys.tku.edu.tw
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 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.**