朝陽科技大學 094學年度第2學期教學大綱
Science and Technology in Modern Life 科技與生活

當期課號	0105	Course Number	0105
授課教師	李孟真	Instructor	LEE,MENG JEN
中文課名	科技與生活	Course Name	Science and Technology in Modern Life
開課單位	自然與生命科學課群(日)	Department	
修習別	選擇必修	Required/Elective	Topics in Natural and Life Science
學分數	2	Credits	2
課程目標	隨著科技的發展，人類的生活形態不斷地轉變。本課程將介紹物理、化學與生物等科技之基本觀念、在人類文明中所扮演之角色以及在自然生態、環境、社會、健康…等層面所造成之影響與衝擊，期待同學能以理性與人性爲出發點，培養出一個科學的人生觀。	Objectives	Students are introduced to the study of scientific and technological developments in human life. They should develop their understanding of construction, manufacturing, energy/transportation and information/communication as well as biotechnology and nanotechnology. Students should be able to comprehend physical, chemical and biological concepts and to understand the impacts brought by the science and technology on environment and human society.
教材	教師自編教材 video CD teachers own material plus video CD	Teaching Materials	
成績評量方式	口頭報告+考試	Grading	oral presentation and written examination
教師網頁	_		
教學內容	1.生物的化學基礎 2.細胞：生命的積木 (1)細胞的構造 (2)訊息傳遞練 3.生命的藍圖 (1)遺傳學和遺傳 (2)基因的分子生物學 (3)DNA技術與人類基因體 4.人體：完美的機器 5. 身體的防禦系統--免疫學 (1) 免疫細胞 (2) 抗體 (3) HIV 及其他病毒 6. 生物多樣性的理論基礎－演化學 (1)微生物的演化 (2)動物的演化 (3)植物和真菌的演化 5.生物與環境－生態學 (1)生命之網：生產者與掠食者 (2)世界的生態群落：從沙漠到雨林	Syllabus	1. The chemistry aspect of all organism 2. the building block for life: the cell 1) the structure of the cell 2) signal transduction 3. blueprint of life 1) basic genetics 2) molecular genetics 3) DNA technology and human genome 4. human body: the perfect machine 5. defense mechanism of the body: immunology 1) cells of the immune system 2) antibodies 3) HIV and other viruses 6. The fundamental theory of biodiversity: ecology 1) the producer and predator 2) the world ecology: from desert to rainforest

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