朝陽科技大學 099學年度第2學期教學大綱
Topics on Microorganism's Utilization 微生物利用特論

當期課號	7672	Course Number	7672
授課教師	簡宣裕	Instructor	CHIEN,SHIUAN YUH
中文課名	微生物利用特論	Course Name	Topics on Microorganism's Utilization
開課單位	應用化學系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	課程主要目的在使學生對微生物的利用有一般瞭解與具有基本知識，增加工作的職能與發展方向。課程之介紹內容包括 1.微生物利用於食品產業以產製酒精與乳酸飲料及蛋白類食品之加工品， 2.微生物利用於醫藥產業以製造抗生素、生產疫苗與微生物感測器， 3.微生物利用於工業以生產酵素、有機酸及有機溶劑， 4.微生物利用於農業以產製微生物肥料、微生物農藥及生質能源， 5.微生物利用於環境產業以降解有機污染物、去除污水重金屬與監測環境污染及生產可分解性塑膠的原料。	Objectives	The course is designed to let student have general concept and possess basic knowledge about the utilizations of microorganisms for promoting job ability and expanding career field. The content of the course will cover the topics on applying microorganisms to food industry, pharmaceutical and medical industries, agriculture, and environmental industry for producing alcoholic and lactic beverages, processed food, antibiotics, vaccines, biosensors, enzymes, organic acids and solvents, microbial fertilizers and pesticides, renewable biomass and energy, monomers of degradable plastic, degrading polluted organic compounds, and depriving heavy metals from wasted water.
教材	1.Industrial microbiology - an introduction. 2001. Edited by Michael J. Waites, Neill L. Morgan, John S. Rockey and Gary Higton. Published by Blackwell Science Ltd. 2.Microbial biotecnology - principle and application. 2003. Edited by Lee Yuan Kun. Published by World Scientific Publishing Co. Pte. Ltd. 3.應用微生物學。 2008 。王三郎著。高立圖書有限公司編印。	Teaching Materials	1.Industrial microbiology - an introduction. 2001. Edited by Michael J. Waites, Neill L. Morgan, John S. Rockey and Gary Higton. Published by Blackwell Science Ltd. 2.Microbial biotecnology - principle and application. 2003. Edited by Lee Yuan Kun. Published by World Scientific Publishing Co. Pte. Ltd. 3.應用微生物學。 2008 。王三郎著。高立圖書有限公司編印。
成績評量方式	平時測驗30% 期中考:30% 期末考:40%	Grading	Quiz:30% Mid Term:30% Final-Exam:40%
教師網頁			
教學內容	課程之介紹內容包括 1.微生物利用於食品產業以產製酒精與乳酸飲料及蛋白類食品之加工品， 2.微生物利用於醫藥產業以製造抗生素、生產疫苗與微生物感測器， 3.微生物利用於工業以生產酵素、有機酸及有機溶劑， 4.微生物利用於農業以產製微生物肥料、微生物農藥及生質能源， 5.微生物利用於環境產業以降解有機污染物、去除污水重金屬與監測環境污染及生產可分解性塑膠的原料。	Syllabus	The content of the course will cover the topics on applying microorganisms to food industry, pharmaceutical and medical industries, agriculture, and environmental industry for producing alcoholic and lactic beverages, processed food, antibiotics, vaccines, biosensors, enzymes, organic acids and solvents, microbial fertilizers and pesticides, renewable biomass and energy, monomers of degradable plastic, degrading polluted organic compounds, and depriving heavy metals from wasted water.