

97-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	生技工業應用技術	Serial No. / ID	0380 / BDR5036
Dept.	生物產業科技學系博士班	School System / Class	研究所博士班1年1班
Lecturer	柯文慶	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	NO
Time / Place	(一)ABC / H543	Language	Chinese

Introduction
<ol style="list-style-type: none"> 1. Describe the definition and scope of bio-products to give basic concept. 2. Introduction to various technologies used in bioindustry to understand the connotation of traditional and modern biotechnology. 3. Provide a chance for communication with presentation of personal study experience. 4. Foster qualified personnel with basic specialty and application ability on bioprocess.

Outline
<ol style="list-style-type: none"> 1. Traditional processing technology: canning, low temperature storage, dehydration, fermentation, brining, smoking 2. Culture preservation technology: general methods, freeze drying, liquid nitrogen 3. Freshness keeping technology: controlled freezing point storage, partial freezing, high-voltage electrostatic field 4. High pressure technology: generation, gel formation, inhibition of microorganism and enzymes 5. Membrane technology: ultrafiltration and reverse osmosis 6. vacuum technology: frying, cooling 7. Supercritical fluid extraction: principle, processes, extraction of food components 8. Atomizing: spray drying, grinding, nano technology 9. Fermentation: kojic acid, organic soy sauce 10. Biotechnology: enzyme immobilization, bioreactor, genetic engineering 11. Others: plant factory, compost fermentation

Prerequisite
not required