

## 99-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	生技工業應用技術	Serial No. / ID	1412 / 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 / H571	Language	Chinese

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

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

Prerequisite
not required