

## 99-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	生化工程學	Serial No. / ID	0405 / BTI3011
Dept.	生物產業科技學系	School System / Class	大學日間部3年1班
Lecturer	吳建一	Full or Part-time	專任
Required / Credit	Required / 3	Graduate Class	No
Time / Place	(一)2 / H541 (二)34 / H541	Language	Chinese

### Introduction

The aim of this course is to provide the students with or without the related background, to obtain a general concept and view on this field. By the introduction of this course, the students can better realize this field and further want to explore themselves to this area.

### Outline

This course introduces how the basic chemical engineering principles (such as heat and mass transfer and process design) are applied to bioengineering processes and how various biological molecules (such as cells, proteins, enzymes, antibodies, etc.) are utilized to produce various substances for human benefit. This course will cover: (1) basic principles of chemical engineering, (2) bioreaction kinetics of enzymes, (3) cell growth kinetics, and metabolisms, (4) fermentor design and performance, (5) bioseparation processes, such as adsorption and chromatography, and (6) recent topics in biochemical engineering fields. Thus, this course delivers the fundamentals of Biochemical Engineering to motivate the students to prepare for the new bioindustries.

### Prerequisite

Microbiology, Calculus