

## 102-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	植物工廠與實習	Serial No. / ID	0603 / MBI2045
Dept.	分子生物科技學系	School System / Class	大學日間部2年1班
Lecturer	余聰安	Full or Part-time	專任
Required / Credit	Optinal / 2	Graduate Class	No
Time / Place	(六)234 / J505	Language	Chinese

Introduction
<p>The increasing population and more intense extreme weather events pose a major difficulty for food supply in human future. One of the potential solution to these increasing challenges is plant factory. The plant factory is a hightech growing system that plant is cultivated in an artificial control of growing conditions. Utilizing modern technology, plant factory can constantly and Non-seasonally grow high quality vegetables and crops in high density. Unaffected by the weather, the growth rate of vegetables can be two to four times faster than those grown in openair fields, and yields can be ten to even twenty times higher. For pursuing academic and intellectual excellence, Da-Yeh university sponsored to built the LED (light-emitting diodes)-based plant factory and develop the techniques of artificial growing system is on-going.</p>

Outline
<p>To optimized plant growth system, we analyzed the artificial environment necessary by controlling the composition of culture solution, spectrum and intensity of LED light, temperature, humidity, and carbon dioxide (CO<sub>2</sub>) concentration levels. In addition to research and education purpose, the LED-based plant factory of Da-Yeh university is also able to provide a designed homegrown model and key techniques for commercial operation.</p>

Prerequisite
biology