99-2 Preliminary Syllabus, Da-Yeh Univ

| Information | | | |
|-------------------|---------------|-----------------------|----------------|
| Title | 生物產業程序 | Serial No. / ID | 0780 / BTI4015 |
| Dept. | 生物產業科技學系 | School System / Class | 大學日間部4年1班 |
| Lecturer | 陳明造 | Full or Part-time | 兼任 |
| Required / Credit | Optinal / 3 | Graduate Class | Yes |
| Time / Place | (四)789 / H566 | Language | Chinese |

Introduction

- 1. To teach students to recognize bioindustry category.
- 2. To teach students to know advantages and disadvantages of microorganisms.
- 3. To teach students to know the methods of collection, isolation and identification of organisms.
- 4. To teach students to know how to utilize microorganism to develop bioproducts.
- 5. To teach students to know the processes of fermentation.
- 6. To teach students to know long-term preservation of cultures.

Outline

- 1. Collection, isolation and identification of cultures.
- 2. Types of media and microorganism culture.
- 3. Screening for new products from microorganisms.
- 4.Inoculum development.
- 5. Nutritional improvement of processes.
- 6.Long-term preservation of industrially important microorganisms.
- 7.shake-flask fermentation.
- 8. Solid-state fermentation.
- 9. Working with anaerobic bacteria.
- 10. Methods for transformation of organic comounds.
- 11. Substrates for large-scale fermentation.
- 12. Cell and tissue culture of plants and animals.
- 13. Types of starter cultures.
- 14. Concentrated starter cultures.

Prerequisite

Major in food science and related departments.