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

| Information       |                          |                       |                |
|-------------------|--------------------------|-----------------------|----------------|
| Title             | 材料科學與工程導論(二)             | Serial No. / ID       | 0588 / MSI2005 |
| Dept.             | 材料科學與工程學系                | School System / Class | 大學日間部1年1班      |
| Lecturer          | 何文福                      | Full or Part-time     | 專任             |
| Required / Credit | Required / 3             | Graduate Class        | No             |
| Time / Place      | (三)4 / H341 (五)12 / H341 | Language              | Chinese        |

## Introduction

The course introduces the basic principles in materials science and engineering related to materials structure, properties and processing. The goal of this course will provide students with the basic knowledge about diffusion, solidification, phase diagram and microstructure development during heat treatment. Also, introduce the practical applications and new development of engineering materials.

## Outline

- 1. Diffusion in solids
- 2. Phase diagram
- 3. Iron-carbon phase diagram
- 4. Solidifacation and phase transformation
- 5. Heat treatment in iron and steel
- 6. Materials in biomedical applications

## Prerequisite

Basic Physics and Chemistry