

# 100-1 Preliminary Syllabus, Da-Yeh Univ

| Information       |                          |                       |                |
|-------------------|--------------------------|-----------------------|----------------|
| Title             | 結晶學與繞射概論                 | Serial No. / ID       | 0853 / MS11006 |
| Dept.             | 材料科學與工程學系                | School System / Class | 大學日間部3年1班      |
| Lecturer          | 宋皇輝                      | Full or Part-time     | 專任             |
| Required / Credit | Required / 3             | Graduate Class        | No             |
| Time / Place      | (四)7 / H443 (五)34 / H443 | Language              | Chinese        |

| Introduction  |
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| This course is divided into two main parts: crystallography and X-ray diffraction analysis. The subject of crystallography is to introduce the the ideas of symmetry, structures, lattices and the architecture of crystals. The subject of X-ray diffraction analysis is describing the principle of X-ray diffraction and its applications in analysis of actual materials. |

| Outline   |
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| Basic Crystallography<br>Geometry and Stereographic Projection of Crystals<br>Reciprocal Lattice<br>Characteristics and Detection of X-rays<br>Coherent Scatterings and Diffraction<br>Fourier Transformation<br>Diffractions of Real Crystals<br>Principle of X-ray Diffractometer<br>Powder Diffraction |

| Prerequisite              |
|---------------------------|
| Calculus, General Physics |