

102-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	分子生物學(一)	Serial No. / ID	0548 / MBI3001
Dept.	分子生物科技學系	School System / Class	大學日間部3年1班
Lecturer	蔡孟峰	Full or Part-time	專任
Required / Credit	Required / 3	Graduate Class	No
Time / Place	(二)34 / J305 (四)6 / J305	Language	Chinese

Introduction

This course emphasizes not only in understanding how life operates in molecular level, but also problem based learning. There are three main goals of this course:

1. Understand the life processes in molecular level.
2. Develop an appreciation of how molecular biology is used in every field of biology.
3. Learn how to analyze and interpret experimental data by formulating models

Outline

Introduction: a brief history

Chapter1. The Mendelian View of the World

Chapter2. Nucleic Acids Convey Genetic Information

Chapter3. The Importance of Weak Chemical Interaction

Chapter4. The Importance of High-Energy Bonds

Chapter5. Weak and Strong Bonds Determine Macromolecular Structure

Chapter6. The Structures of DNA and RNA

Chapter7. Chromosomes, Chromatin, and the Nucleosome

Chapter8. The Replication of DNA

Chapter9. The Mutability and Repair of DNA

Chapter10. Homologous Recombination at the Molecular Level

Chapter11. Site-Specific Recombination and Transposition of DNA

Prerequisite

1. Biology
2. Biochemistry