

103-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	分子生物學實驗	Serial No. / ID	0703 / MBI3091
Dept.	分子生物科技學系	School System / Class	大學日間部3年1班
Lecturer	游志文	Full or Part-time	專任
Required / Credit	Required / 1	Graduate Class	No
Time / Place	(二)89A / J515	Language	Chinese

Introduction
本課程目的乃為配合分子生物學課程，提供學生實際操作的機會。課程設計涵蓋基因操作重組、轉型與基因表現分析。於實驗操作過程，除可培養學生實驗設計的基本認知，學生亦有機會操作研究級的儀器設備，並學習數據整理分析以運用於科學論文報告。藉此，希望激勵學生的研究興趣，與參與研究工作的意願。

Outline
1 Purification of plasmid DNA
2 Restriction digest of plasmid DNA and gel electrophoresis
3 Primer design and polymerase chain reaction (PCR)
4 Extract DNA from agarose gel
5 DNA recombination
6 Competent cell preparation and transformation
7 Colony screening
8 Protein expression and purification
9 Midterm
10 Extraction and purification of cellular RNA/gel electrophoresis to check RNA
11 reverse transcription PCR
12 Northern (1) ? gel electrophoresis and transfer
13 Northern (2) ? label probe / hybridization
14 Northern (3) ? washing and development of blots
15 SDS-PAGE
16 Western
17 Final

Prerequisite
1. 生物學
2. 生物化學