

# 101-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	動物基因轉殖技術與實驗	Serial No. / ID	2452 / MBI4012
Dept.	分子生物科技學系	School System / Class	大學日間部4年1班
Lecturer	黃尉東	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	Yes
Time / Place	(三)234 / J505	Language	Chinese

## Introduction

The course will discuss the basic concept and development of transgenic animals and related techniques. The gameteogenesis and maturation of gametes, the mechanism of embryo development, the application of zebrafish as transgenic model, transgenic techniques and related facilities, microinjection method, cloning, stem cell culture and protein expression and extraction will be introduced.

## Outline

1. Course Introduction
2. Lab Safety
3. Introduction to Bioinformatics
4. Application of Microscopes-1
5. Application of Microscopes-2
6. Application of Image Systems-1
7. Application of Image Systems-2
8. Gametogenesis and Fertilization
9. Midterm Exam
10. Preparation of Embryos and Evaluation
11. Electroporation
12. Microinjection Facilities
13. Preparation of Micropipette
14. Microinjection
15. Fluorescent Staining
16. Histology
17. Immunohistochemistry
18. Final Exam

## Prerequisite

General Biology, Biochemistry, Molecular Biology