

<p><b>尊重智慧財產權，請使用正版教科書，不得非法影印。</b></p> <p>使用逾期或，未取得合法授權之教材或將試用版教材以公開傳輸利用者，皆屬侵害他人著作權，將處刑責、拘役及罰金，請勿以身試法。</p>	
學期	1112
開課單位	生命科學系
流水號	24019
課號	LS5024-*
授課教師	陳盛良
課程名稱(中文)	發育生物學
課程名稱(英文)	Developmental Biology
課程學制	碩博同修
學分	2
課程目標	介紹學生認識模式生物的發育過程
授課內容	<p>"Developmental Biology</p> <p>This subject is designed for undergraduate and postgraduate students who have no previous training in embryology and developmental biology related fields. This subject is a one year course with two credits for each semester. Interested students should have basic knowledge in Cell Biology, Biochemistry, and Molecular Biology, before they take this subject. Students taking this subject will be introduced with the early development of four model animals, including fruit fly, zebra fish, nematode, and mouse/human. The creation of organisms by the fertilization of sperms and eggs will also be discussed.</p> <p>Text book: Developmental Biology, 8th edition 2006, by Scott F. Gilbert</p>

The application of these knowledge in biomedical research and clinical therapy will be discussed at the end of each chapter.

The following is the syllabus for each semester:

#### Scheduals of Developmental Biology(I)

Introduction

Experimental Embryology

Fertilization

Sex-determination

The saga of the germ line

Early development in invertebrates–Sea Urchin

Early development in invertebrates–C. elegans

The genetics of axis specification in Drosophila

#### Scheduals of Developmental Biology(II)

Early development in amphibians

The early development of vertebrates: Fish

The early development of vertebrates: Birds

The early development of vertebrates: Mammals

The emergence of the ectoderm–CNS, EYE. and neural crest cells

Paraxial mesoderm: the derivatives of somites

Intermediate mesoderm: the urogenital system

Lateral plate mesoderm: the vascular system/blood

The development of endoderm derivatives

Metamorphosis

Regeneration and aging"

教科書/參考書

"Developmental Biology, 8th edition 2006, by Scott F. Gilbert

And

Principles of Development: Lewis Wolpert

Principles of Developmental Biology: F. H. Wilt & S. C.Hake"

自編教材比例

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授課方式

講授

評量配分比重	Written tests including mid-term (50%) and final(50%) tests.	
辦公時間	week days 0800-1800	
授課週數	18	
彈性教學說明		
課程領域	醫藥	
系所核心能力	強度指數	評量方式
高等生物專業知識	(5) 非常高	紙筆測驗/會考
創新及整合研究	(5) 非常高	紙筆測驗/會考
專業寫作與表達	(2) 低	紙筆測驗/會考
國際觀	(2) 低	紙筆測驗/會考