

國立清華大學 104 學年第 2 學期新開課程課程大綱

科號	英文選課	組別	學分	2	人數限制	/Offered in English 須與老師討論後加簽選課
修課年級						
上課時間	T2T3	教室				
科目中文名稱	植物分子生物技術特論					
科目英文名稱	Topics on Plant Molecular Biotechnology					
任課教師	劉姿吟					
擋修科目					擋修分數	

※下列各欄由任課教師提供※

一、課程說明	To help students understand what plant molecular biotechnology is all about and obtain the basic and update knowledge of the technology behind plant genetic manipulation, and the application of this technology to the growth and cultivation of plants.
二、指定用書	Adrian Slater, Nigel W. Scott, Mark R. Fowler. (2008) Plant Biotechnology: The Genetic Manipulation of Plants. 2nd edition. Oxford University Press.
三、參考書籍	Ara Kirakosyan, Peter B. Kaufman. (2009) Recent Advances in Plant Biotechnology. Springer.
四、教學方式	採互動式教學:學生需要課前預習以及課堂上參與討論
五、教學進度	<ol style="list-style-type: none"> 1. Plant Genomes: The Organization and Expression of Plant Genes 2. Plant Tissue Culture 3. Techniques for Plant Transformation 4. Vectors for Plant Transformation (I) 5. Vectors for Plant Transformation (II) 6. Protein expression using the plant system (I) 7. Protein expression using the plant system (II)
	<p>Midterm Oral Presentation</p> <ol style="list-style-type: none"> 8. The Genetic Manipulation of Herbicide tolerance 9. The Genetic Manipulation of Pest Resistance 10. Strategies for engineering stress tolerance (I) 11. Strategies for engineering stress tolerance (II) 12. Improvement of crop yield and quality

	13. Molecular farming 14. Advances in Plant Biotechnology
	Final Oral Presentation
六、成績考核	In-class discussion: 20% Midterm oral presentation: 40% Final oral presentation: 40%
七、講義位址 http://	