

國立清華大學 97 學年第 2 學期課程大綱

科號		組別		學分	2	人數限制	
修課年級	<input type="checkbox"/> 大學部 年級以上 <input checked="" type="checkbox"/> 碩士班一年級以上(含博士班) <input type="checkbox"/> 碩士班二年級以上(含博士班)						
課程內容	<input type="checkbox"/> 普通生物 <input type="checkbox"/> 細胞生物 <input type="checkbox"/> 生物化學 <input type="checkbox"/> 分子生物 <input type="checkbox"/> 物理生化 <input type="checkbox"/> 結構生物 <input checked="" type="checkbox"/> 醫學相關						
上課時間	F3, F4			教室			
科目中文名稱							
科目英文名稱	Special topics on Molecular Medicine						
任課教師	彭明德, 陳令儀 and invited lecturers						
擋修科目				擋修分數			

※下列各欄由任課教師提供※

一、課程說明	<p><i>Special topics on Molecular Medicine</i> offers a course to introduce biomolecule in medicine. This course will simplify the seemingly complex concepts of DNA and protein in medicine so that students can find an easy entry into the world of molecular medicine. The aim of this course is to present a well-balanced incorporation of the basic concepts, applicable clinical examples, advances in molecular biology and their impact on medicine, and gaps that will be filled by further developments in modern investigative biology and medicine. It will help graduate students to grasp the fundamentals of the field and to further explore the depths and details of the related topics. Lecturers from Institute of Molecular Medicine pull together expertise in their research fields and provide related clinical examples to make this course more relevant to practice and raise the level of interest.</p>
二、指定用書	無
三、參考書籍	<u><i>Molecular Medicine: An introductory Text</i></u> by R Trent, Academic Press, 3 rd edition (2005).
四、教學方式	
五、教學進度	共16周, 每周 2 小時, see syllabus below
六、成績考核	期中及期末報告

七、講義位址 http://	eLearning
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Tentative Syllabus

Date	Topic	Lecturer
2/27	Introduction to molecular medicine	彭明德
3/13	DNA, RNA, Gene and Chromosome	彭明德
3/20	Genomics, Proteomics and Genetic Diseases	彭明德
3/27	Oxidative stress and mitochondrial dysfunction in muscle diseases	彭明德
4/10	The genetics and pathology of mitochondrial oxidative phosphorylation system	高茂傑
4/17	DNA repair defects and diseases	劉銀樟
4/24	Application of MRI in resaech and clinics	李寬容
5/01	Mid-term Exam (Group Report)	彭明德 陳令儀
5/08	Infectious diseases (tissue engineering)	張晃猷
5/15	Probiotics and theoretical drug design	林志侯
5/22	The retina function and vision defects	焦傳金
5/29	Signaling in neuronal development and diseases	陳令儀
6/05	Cell adhesion and human diseases	徐瑞洲
6/12	The role of postsynaptic density in neurodegenerative diseases	張亮君
6/19	Neuron and neurodegenerative diseases	葉世榮
6/26	Final Exam (Group Report)	彭明德 陳令儀