

## 國立清華大學 107 學年第 2 學期課程大綱

科號		組別		學分	1	人數限制	
修課年級	<input checked="" type="checkbox"/> 大學部 1 年級以上 <input checked="" type="checkbox"/> 碩士班一年級以上(含博士班) <input checked="" type="checkbox"/> 碩士班二年級以上(含博士班)						
上課時間	M5			教室			
科目中文名稱	癌症生物學導論						
科目英文名稱	Cancer Biology 101						
任課教師	王群超						
擋修科目	無			擋修分數	無		

※下列各欄由任課教師提供※

一、課程說明	<p>If you want to understand how cancer starts and spreads, this course is for you. This course is also a useful introduction to cancer biology for undergraduate students from diverse backgrounds. Some biology knowledge will be helpful but not required. We'll talk about the origins of cancer and the genetic and cellular basis for cancer. The factors that have been implicated in triggering cancers and research directions for cancer therapy will also be covered.</p>
二、指定用書	N/A
三、參考書籍	<p>Cancer A-Z, American Cancer Society          Understanding Cancer Series, National Cancer Institute          CancerQuest.org, Emory University          Learn.Genetics, University of Utah          Recent publications investigating human cancer</p>
四、教學方式	Lectures, student presentations and discussions
五、教學進度	<p>Unit 1: Origins and Overview          Week 1 – The History of Cancer          Week 2 – What is Cancer?</p> <p>Unit 2: The Biological Building Blocks          Week 3 – Basic Genetics (Mutation, DNA Repair, and Recombination)          Week 4, 5 – Gene Expression and Regulation (Transcription and Translation, Signal Transduction Pathways, Proto-oncogenes)</p>

	<p>Unit 3: Growth Inhibitors  Week 6 – The Cell Cycle and Tumor-Suppressor Genes  Week 7 – Example: TP53  Week 8 – Examples: BRCA1 and BRCA2</p> <p>Unit 4: Death and Life: Apoptosis and Tumorigenesis  Week 9 – The Apoptosis Pathway  Week 10 – "Death Receptors"  Week 11 – Tumorigenesis</p> <p>Unit 5: Breast Cancer 101  Week 12 – About Breast Cancer  Week 13-15 – Breast Cancer Research Examples (Molecular Subtypes, Cell-to-cell Variation)</p> <p>Unit 6: Student Presentations  Week 16-17 – Student Presentations</p>
六、成績考核	Participation (asking/answering questions and joining in discussions) 40% Student Presentations 20% Final Exam 20% Quizzes 20%
七、講義位址 http://	iLMS