

國立中正大學課程大綱

National Chung Cheng University Course Syllabus

學年/學期(Academic Year / Semester)	112/1		
課程名稱 (Course name)	Nanomedicine		
課碼 (Course code)	2708018-01	學分數 Credit(s)	2
授課教師 (Instructor)	Cheng-I Lee Email: biocil@ccu.edu.tw tel: +886-5-2720411 ext. 66511		
	☒ Professor ☐ Associate Professor ☐ Assistant Professor		
授課方式 (teaching methods)	☐ Lab ☐ Seminar ☐ Student Presentation ☒ Lecture ☒ Discussion		
先修科目 (Prerequisite)	This course is intended for graduate students who are interested in the development of medicines based on current nanotechnology. Multidisciplinary background is expected.		
課程介紹與教學目標 (Course Description and Objectives)	Course Description (2 credits): The technology aims to develop new materials for use in medicine. Nanotechnology is regarded as one of the key technologies of the future. Nanomedicine has the potential to yield intelligent solutions to many of the current medical problems Objectives: Students who successfully complete this course should have: a. An understanding in the drug design in nanoscale. b. An understanding in the toxicity of nanomaterials c. An understanding in biomedical application of nanomaterials.		

教科書及參考書 (Textbooks and References)	Suggested readings are available in E-course 2
學習評量與成績配分 (Assessment and Grade scale)	Class participation and discussion: 30% Oral presentation: 30% Term paper: 40%

課程進度(Course Schedule)

Week	Date	Progress
1	9/6	Introduction of the course
2	9/13	Introduction of innovated nanomaterials & nanomedicine
3	9/20	Hydrogel Nanocomposites
4	9/27	Transition metal-nanocomplex and quantum dots
5	10/4	Nanoscale Drug Delivery
6	10/11	PEGylated liposomes, carbon nanomaterials & plasmonic Nanoparticles
7	10/18	Physiochemical Factors Impacting Nanomaterial Translocation and Toxicity
8	10/25	International Biology Conference (online)
9	11/1	Med-term week. No class
10	11/8	Preparation and Cytotoxicity of Photoactive Nanoparticles
11	11/15	Innovation of nanomaterials and nanomedicine
12	11/22	Short oral presentation (idea construction)
13	11/29	Full oral presentation
14	12/6	Nanoparticles for diagnosis and imaging
15	12/13	Nanoparticles for therapeutic applications
16	12/20	Discussion- term paper
17	12/27	Discussion- term paper
18	1/3	Final examine week. No class