國立東華大學

課　綱　Course Outline

資訊工程學系資工組

中文課程名稱 Course Name in Chinese	臨床醫學與智慧醫療照護				
英文課程名稱 Course Name in English	Clinical Medicine and Smart Healthcare				
科目代碼 Course Code	CSIE62210	班　別 Degree	碩士班 Master's		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時　數 Hour(s)	3.0
先修課程 Prerequisite					

課程目標 Course Objectives

透過最新的資訊專業領域(如人工智慧、物聯網、大數據機器學習等)，結合第一線醫療的操作，提高臨床醫學的品質、效率和安全性，實現更加個別化的醫療護理。

本課程將會安排執業的醫生前來課堂中講授，分享在臨床醫學上的經驗談，透過案例分享，結合當前最新的醫療技術，探討如何應用資訊科技提高醫療水平。

By leveraging the latest advancements in information technology fields such as artificial intelligence, Internet of Things, big data, and machine learning, in conjunction with frontline medical practices, clinical medicine's quality, efficiency, and safety can be improved, enabling more personalized healthcare.

This course will invite practicing physicians to the classroom to share their experiences in clinical medicine through case studies, combining the latest medical technologies to explore how information technology can be applied to enhance healthcare standards.

系教育目標 Dept.'s Education Objectives

1	探究學科知識，善用專業技能 Explore academic knowledge, utilize professional skills.
2	訓練評析思考，創新解決問題 Exercise analytical thinking, enhance creative problem solving skills.
3	學習團隊分工，強化溝通表達 Participate in teamwork, strengthen communication skills.

系專業能力 Basic Learning Outcomes		課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	統合資工知識技術之能力 Ability to integrate knowledge and technologies of computer science and information engineering.	○
B	設計技術理論驗證實驗之能力 Ability to design and conduct science experiments and to validate hypotheses.	●
C	資訊軟硬體設計開發之能力 Ability to design and develop computer software and hardware.	○
D	團隊專案開發之能力 Ability to design and develop team projects.	○
E	批判性思考與創新研發之能力 Ability of analytical thinking, creative research planning, and innovative development.	○

圖示說明Illustration：● 高度相關 Highly correlated ○中度相關 Moderately correlated

課程大綱
Course Outline

1. 臨床醫學介紹（Introduction of clinical medicine）
2. 臨床診斷學與智慧醫療照護（Clinical diagnosis and smart healthcare）
3. 內科學與智慧醫療照護（Internal Medicine and smart healthcare）
4. 外科學與智慧醫療照護（Surgery and related smart healthcare）
5. 婦產科學與智慧醫療照護（Obstetrics & Gynecology and smart healthcare）
6. 小兒科學與智慧醫療照護（Pediatrics and smart healthcare）
7. 社區醫學與智慧醫療照護（Community medicine and smart healthcare）
8. 醫學影像學與智慧醫療照護（Medical Imaging and smart healthcare）
9. 醫學檢驗學與智慧醫療照護（Laboratory medicine and smart healthcare）
10. 藥劑學與智慧醫療照護（Pharmacology and smart healthcare）
11. 臨床護理與智慧醫療照護（Clinical nursing care and smart healthcare）
12. 智慧醫療照護的現在與未來（Smart healthcare, now and in the future）

資源需求評估（師資專長之聘任、儀器設備的配合···等）
Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

師資為具備專科醫師資格之醫師，醫療科主任或各臨床醫療領域五年以上經驗之專家。
Qualification of teachers: Physician with license of medical subspecialist, clinical chief, Clinical specialist at least 5 years' experience in the related field.

課程要求和教學方式之建議
Course Requirements and Suggested Teaching Methods

建議資工領域相關科系碩士生或3年級(含)以上大學生修習。It is recommended that master's students in related departments or college students in the third grade (inclusive) or above study in the field of engineering.

其他
Miscellaneous