

國立清華大學課程大綱

科號	11120BME 504700	組別		學分	3	人數限制	無
上課時間	M567			教室	會議室		
科目中文名稱	生醫感測技術與數值統計分析						
科目英文名稱	Biomedical sensing technology and statistical analysis						
任課教師	林幸瑩						
擋修科目	N/A			擋修分數	Contact Prof. prior to choose the course		
一、課程說明	This course provides paper discussion of biomedical sensing technologies. BME students will have hand-on practices on developing a confluent IoT biosensing technology with simple App control. Statistical analysis will be included.						
二、指定用書	無						
三、參考書籍	<ol style="list-style-type: none"> 1. Handbook of Biomedical Instrumentation ISBN-13: 978-9339205430 2. Measurement, Instrumentation, and Sensors Handbook ISBN 9781439848913 3. Journal papers 4. https://appinventor.mit.edu/ 5. Arduino, flutter, raspberry pi, dPCR, ddPCR platforms 						
四、教學方式	<p>Experiments</p> <p>Slides</p> <p>On-site and remote discussion</p>						
五、教學進度	<ol style="list-style-type: none"> 1. Medical instrumentation, regulation of medical devices, patient monitoring systems, clinical laboratory instruments 2. Surface plasmon resonance sensor, surface-enhanced Raman scattering sensor, electrochemical sensor, photonic sensor, imaging sensor, acoustic sensor 3. Biosensors 4. Applications of liquid biopsy 5. Familiar with one sensor or system 6. Streamlined assay and sensing platform 7. Statistical data analysis 						
六、成績考核	<p>Paper reading and discussion 30%</p> <p>Homework 30%</p> <p>Team work 30%</p> <p>Attendance 10%</p>						
七、講義位址 http://	Google Drive						