



Biomedical Sensors

Offered in 114-2

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	Serial Number	
	16402	
	Course Number	
	DBME5037	
	Course Identifier	
	528 U2010	
	No Class	
	3 Credits	
	Elective	▼
	DEPARTMENT OF BIOMERICAL ENG ...	
	Zong-Hong Lin	▼
	Fri 6, 7, 8	
	綜203	
	Type 2	
	40 Student Quota	
	NTU 40	

Notes

The course is conducted in English.

Limits on Course Adding / Dropping

Restriction: juniors and beyond

NTU Enrollment Status


Enrolled	Remaining	Registered
0 / 40	40	0

Course Description


本課程將會從科學及工程的角度來教授學生有關生醫感測器的特性。內容將涵蓋功能性材料的主要類別，以及對當前元件種類和工作原理的實際回顧，特別是在多種不同感測上的應用。

This course introduces the fundamental properties of biomedical sensors from both scientific and engineering perspectives. The course covers the major classes

 No Specialization Program

 English

 NTU COOL

 Core Capabilities and Curriculum Planning

of functional materials and provides a practical overview of current sensor device types and their working principles, with particular emphasis on their applications across diverse sensing modalities.

Course Objective

學生透過此課程的學習，將會了解生醫感測器特有的性質及目前發展中的應用，使學生具備充分的背景知識，應用在相關技術及產品的研發上。

Through this course, students will gain an understanding of the unique characteristics of biomedical sensors and their emerging applications. This training equips students with a solid foundational background, enabling them to apply their knowledge to the development of related technologies and products.

Course Requirement

普通化學和普通物理

General Chemistry and General Physics

 Expected weekly study hours before and/or after class

 Office Hour

 Designated Reading

 References

1. Biomedical Sensors and Measurement
2. Smart Biosensors in Medical Care
3. Journal Papers 期刊論文

Grading

40% **Midterm Exam**
Course content

30% **Literature Report**
Select the latest Journal Paper related to Biomedical Sensors and report it

30% **Final Exam**
Course content

1. NTU has not set an upper limit on the percentage of A+ grades.
2. NTU uses a letter grade system for assessment. The grade percentage ranges and the single-subject grade conversion table in the NATIONAL TAIWAN UNIVERSITY Regulations Governing Academic Grading are for reference only. Instructors may adjust the percentage ranges according to the grade definitions. For more information, see [the Assessment for Learning Section](#) °

 Adjustment methods for students

 Make-up Class Information

Course Schedule

Week 1 2/27 National Holiday

Week 2	3/6	Introduction
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Week 3	3/13	Basics of Sensors and Measurement
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Week 4	3/20	Physical Sensors and Measurement
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Week 5	3/27	Enter the laboratory to see how to make a sensor (I)
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Week 6	4/3	National Holiday
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Week 7	4/10	Piezoelectric and Triboelectric Sensors
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Week 8	4/17	Midterm Exam
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Week 9	4/24	Chemical Sensors and Measurement
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Week 10	5/1	National Holiday
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Week 11	5/8	Biosensors and Measurement
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Week 12	5/15	Literature Report
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Week 13	5/22	Literature Report
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Week 14	5/29	Enter the laboratory to see how to make a sensor (II)
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Week 15	6/5	Literature Report
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Week 16	6/12	Final Exam
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