



Introduction to Biophotonics

Offered in 114-2


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<p> Serial Number 18842</p> <p> Course Number DBME5031</p> <p> Course Identifier 528 U0180</p> <p> No Class</p> <p> 3 Credits</p> <p> Elective DEPARTMENT OF BIOMEDICAL ENG ...</p> <p> Kevin T. Chen</p> <p> Wed 6, 7, 8</p> <p> Please contact the department office for more information</p> <p> Type 2</p> <p> 25 Student Quota</p>	<p> Notes</p> <p>The course is conducted in English ° Classroom : Rm. 439, Yonglin Biomedical Engineering Hall 、 LI-AN CHU 、 TUNG-LIN YANG 、 YU-HSIANG CHENG 、 HSIANG-CHIEH LEE 、 KUNG-BIN SUNG合授</p> <p> Limits on Course Adding / Dropping</p> <p>Restriction: juniors and beyond and Restriction: within this department (including students taking minor and dual degree program)</p> <p> NTU Enrollment Status</p> <table border="1"> <thead> <tr> <th>Enrolled</th> <th>Remaining</th> <th>Registered</th> </tr> </thead> <tbody> <tr> <td>0 / 25</td> <td>25</td> <td>0</td> </tr> </tbody> </table> <p> Course Description</p> <p>The course is divided into two sections: A. An introduction to the fundamental principles, phenomena, devices and systems</p>	Enrolled	Remaining	Registered	0 / 25	25	0
Enrolled	Remaining	Registered					
0 / 25	25	0					

NTU 25

 No Specialization Program

 English

 NTU COOL

 Core Capabilities and Curriculum Planning

in photonics and optoelectronics.

B. Survey of Applications – Medical imaging, Optical imaging etc.

Course Objective

A. Understand the fundamental principles, phenomena, devices and systems in photonics and optoelectronics.

B. Gain knowledge of photonics and optoelectronics applications in biomedicine, including microscopy, spectroscopy, medical imaging, and super resolution techniques.

C. Gain hands-on experience in academic writing, including literature survey, writing a scientific proposal, and peer review.

Course Requirement

Expected weekly study hours before and/or after class

After class: 6 hours/week

 Office Hour

 Designated Reading

 References


Grading

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 2/25 Light I

Week 2 3/4 Light II (Prof. Chu)

Week 3 3/11 Waveguides

Week 4 3/18 Semiconductors and light emitting diodes

Week 5 3/25 Photodetectors

Week 6 4/1 Lasers (Prof. Cheng)

Week 7 4/8 Polarization

Week 8 4/15 Midterm exam

Week 9 4/22 Optical spectroscopy techniques (Prof. Sung)

Week 10 4/29 Diffuse optics for sensing/imaging applications (Prof. Sung)

Week 11 5/6 Optical microscopy and microscope system design (Prof. Chu)

Week 12 5/13 Optical coherence tomography (Prof. Lee)

Week 13 5/20 Super resolution techniques (Prof. Yang)

Week 14 5/27 Electron microscopy and implementation of microscope systems (Prof. Chu)

Week 15 6/3 Final quiz

Week 16 6/10 Mock study section

Sponsor |  華南銀行
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NTU Course

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