Lecture Outline 課程大綱

(Minor reasonable changes may apply without prior notice. 有可能出現不事先通知的小幅度且合理的變更。)

Last updated: Feb. 15, 2023

Contemporary Optoelectronics Engineering 當代光電工程 (NEMS5824)

Cheng-Yao Lo 羅丞曜

Lectures are given in English. 英文授課。

Schedule 時間

R2R3R4 每週四 2, 3, 4 堂

Place 地點

Delta321 台達館 321 教室

TA 助教

Mr. Pancham，#80128，pancham.eic06g@gapp.nthu.edu.tw

Description 課程目標

The purpose of this lecture is to give novel applications with optoelectronic devices through engineering.

Students will gain combinational knowledge of solid-state and polymer electronics device and system as well as their corresponding applications in industry with the latest engineering ideas. In addition to the oral lecture, students are requested to present some latest inventions as a part of the training.

本課程之目標在於搭配工程方法說明新穎之光電元件應用。

學生將獲得包含固態與有機電子及系統之知識，並了解其於業界之對應應用及最新工程解決方案。除課堂講說外，學生將被要求以指定之創新光電工程題目簡報，作為發表練習之一部分。

Keyword 關鍵字

Display, fiber, lighting, modulation, storage

顯示元件、光纖、發光元件、調變元件、儲存元件

Prerequisite 修課條件

Students are expected to have a bachelor's degree in physics-, chemistry-, mechanics- or electrical-related engineering fields.

建議修課學生應具有大學部工程背景。

Schedule 課程進度

Week 1~3 (週): Introduction and solid-state physics (導言與固態光電物理)

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Week 4~7 (週): Student Presentation topic A/B/C (active device-related)

Week 8 (週): Mid-term exam/Backup week (期中考/備用週)

Week 9~12 (週): Student Presentation topic D/E/F (passive device-related)

Week 13~16 (週): Student Presentation topic G/H/I (novel ideas)

Week 17 (週): Supplementary topic or summary (補充專題與結論)

Week 18(週): Final exam/Backup week (期中考/備用週)

Evaluation 評分標準

Attendance (出席): 10%

Presentation~~/Exam~~ (專題報告~~/考試~~): 30+30+30%

Reference 參考文獻

Various academic publications.

Note 其他

In order to encourage the attendance, DO NOT record/copy any part of the lecture by electronic devices. However, welcome to write personal notes during lectures.

為鼓勵出席，課程內容禁止以任何電子手法記錄(錄影、錄音等，個人書面筆記不在此限)。