

COURSE DETAIL

OPTICAL SYSTEM DESIGN

Country

Taiwan

Host Institution

National Taiwan University

Program(s)

National Taiwan University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Electrical Engineering Computer Science

UCEAP Course Number

131

UCEAP Course Suffix**UCEAP Official Title**

OPTICAL SYSTEM DESIGN

UCEAP Transcript Title

OPTICAL SYST DESIGN

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This course provides the basic tools and knowledge needed to design optical systems. At the end of the course, students will be able to take system requirements, select possible components and approaches, create candidate designs, and analyze and optimize their performance. Students learn and utilize standard optical design tools, particularly ray-tracing, as well as learning how to create custom system models with wave, polarization, or Gaussian-beam optical modeling. The course objectives include basic design techniques for ray optics; wave optics in isotropic media; design concepts for optical instruments (microscope, telescope, camera lenses); aberration in optical system (real world problems); how to select optical components (lenses, fibers, optical source and detectors); and optical CAD tools discussion (ZEMAX education version).

Language(s) of Instruction

English

Host Institution Course Number

OE5031

Host Institution Course Title

OPTICAL SYSTEM DESIGN

Host Institution Course Details

https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=941%20U0400&c...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Electrical Engineering

Course Last Reviewed

2022-2023

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