UCI Division of Continuing Education

OPTICS PROGRAMS

CHOOSE FROM TWO ONLINE CERTIFICATE TRACKS: OPTICAL ENGINEERING OR OPTICAL INSTRUMENT DESIGN

An increasing amount of today's consumer, industrial and business products incorporate optomechanical systems. These are essential to virtually every industry including defense, medical, clean energy, nanotechnology, automotive, electronics, communications, entertainment, computers, and consumer products.

The **Optical Engineering** track addresses the growing demand for skilled professionals who can conceptualize, design, and manufacture optical components and systems. This track emphasizes lens design, radiometry (sources, optics, and detectors), and optical systems engineering.

The **Optical Instrument Design** track places more of an emphasis on the optomechanical design and manufacturing of components and instruments.

WHO SHOULD ENROLL

The **Optical Engineering** track gives students the skills and experience needed to enter this growing field. The program will benefit entry and mid-level professionals who need to broaden their knowledge and improve their career options in this high-demand area.

The **Optical Instrument Design** track also benefits entry and mid-level professionals, with an emphasis on a wider range of optomechanical and instrument design skills.

In addition, UCI also offers elective courses to provide an opportunity to develop specialized skills related to professional needs or personal interests.

PROGRAM BENEFITS

- Gain useful insights and practical skills for designing and engineering optical components and systems
- Explore the latest technologies in optical engineering including new optical materials and the latest cost effective manufacturing techniques
- Develop skills with industry standard optical software tools, such as Zemax (OpticStudio) Software
- Discover innovative approaches for optical engineering and analysis
- Learn through hands-on design courses which provide skills in manual design, computer simulation, and the art of creating optical components and systems
- Understand and effectively communicate details of optical technical specifications to manufacturer's and quality control personnel

CERTIFICATE ELIGIBILITY AND REQUIREMENTS

Candidates should complete EECS X496.55 Geometrical and Physical Optics or possess equivalent experience or education.

All requirements must be completed within five (5) years after the student enrolls in his/her first course. Students not pursuing a certificate are welcome to take as many individual courses as they wish.

Please visit our website for information on how to earn the Optical Engineering, Optical Instrument Design or both certificates.

OSSC members save 15% on Optics Certificate Program courses.
Email donn@oisc.net.

OSSC
Optical Society of Southern California

PROGRAM FEES

Fees are the same price for both the Optical Engineering and Optical Instrument Design tracks. The total cost of the program varies depending on the elective and pre-requisite courses chosen. Actual fees may differ from the estimate below. Fees are subject to change without prior notice.

Course Fees	$4,620
Candidacy fee	$125
Textbooks and Materials	$925
Total Estimated Cost	**$5,670**

TO ENROLL

Visit ce.uci.edu/optics for full course descriptions, instructor biographies, and enrollment information.

FOR MORE INFORMATION:

EngineeringSciences@ce.uci.edu

OPTICS CERTIFICATE PROGRAMS

COURSE#	PREREQUISITE COURSES	UNITS
EECS X496.55	Geometrical and Physical Optics	3
COURSE#	**REQUIRED COURSES FOR OPTICAL ENGINEERING TRACK (3)**	**UNITS**
EECS X493	Introduction to Lens Design	3
EECS X493.1	Advanced Lens Design	3
EECS X496	Optical Systems Engineering	3
COURSE#	**REQUIRED COURSES FOR OPTICAL INSTRUMENT DESIGN TRACK (2)**	**UNITS**
EECS X498	Optical Instrument Design	3
EECS X499	Optomechanical Systems Engineering	3
COURSE#	**ELECTIVE COURSES** **Optical Engineering Track (Minimum of 2 courses)** **Optical Instrument Design (Minimum of 3 courses)**	**UNITS**
EECS_X493.56	Introduction to Fiber Optics	3
EECS X493.58	Vibration Control for Optomechanical Systems	3
EECS X494.1	Introduction to Radiometry: The Propagation and Measurement of Optical Radiant Energy	3
EECS X496	Optical Systems Engineering	3
EECS X499	Optomechanical Systems Engineering	3

PLEASE NOTE: • EECS X496 is a required course in the Optical Engineering Track and is available as an elective course for the Optical Instrument Design Track.
• EECS X499 is a required course in the Optical Instrument Design Track and is available as an elective course for the Optical Engineering Track.

Course schedules are subject to change. Individual courses may be taken without enrolling in the full certificate.