UCF | CREOL

2025 FAST FACTS

RANKINGS

#1 MOST INNOVATIVE UNIVERSITY IN FLORIDA
U.S. News & World Report

#5 MOST INNOVATIVE PUBLIC UNIVERSITY IN THE U.S.
U.S. News & World Report

#4 BEST U.S. PUBLIC UNIVERSITY FOR OPTICS
U.S. News & World Report

BEST COLLEGES U.S.News & WORLD REPORT MOST INNOVATIVE 2025

In 1987, the Center for Research and Education in Optics and Lasers (CREOL) was established at the University of Central Florida. Over the next few decades, the center grew in both size and prominence and in 2004 became the first college of its kind in the United States. Today, UCF consistently ranks among the top global universities in optics, alongside Caltech, Harvard, and MIT. CREOL, The College of Optics and Photonics, is a leading center for optical science and technology.

FACULTY

35
Core faculty members

400+
U.S. Patents - *and counting*

6,000+
Refereed journal publications

CREOL FACULTY RANK AMONG THE TOP 2% OF GLOBAL OPTICS EXPERTS - AND 44% OF THE TEAM IS RECOGNIZED AS BEING AMONG THE WORLD'S TOP SCHOLARS
- PLOS Biology

DEGREE PROGRAMS

Photonic Science and Engineering B.S.

- Joint program between CREOL and the UCF College of Engineering and Computer Science
- The **only** bachelor's of its kind in Florida and one of only **five** in the United States

Optics and Photonics M.S.

- 3 concentrations offered: optics, photonics, and general
- Nonthesis, thesis, and research report options

Online Optics and Photonics M.S.

- Can be completed entirely online
- Designed for students with a bachelor's degree in electrical engineering, physics, mechanical engineering or related fields

Optics and Photonics Ph.D.

- Nationally competitive fellowships available
- Intended for those with a B.S. in optics, photonics, electrical engineering, physics, or related fields such as materials science, mechanical engineering, or mathematics.

CONNECT

CREOL.UCF.EDU

RESEARCH

$90,000,000+

Research Funding in the last 5 years

FOCUS AREAS

LASER SCIENCE & TECHNOLOGY

FIBER OPTICS

NONLINEAR & QUANTUM OPTICS

INTEGRATED & NANO PHOTONICS

IMAGING & DISPLAY

BIOPHOTONICS

ASTROPHOTONICS

30+ RESEARCH GROUPS, EXPANDING ALONG WITH CREOL'S FACULTY

- ADVANCED HOLOGRAPHY AND LASER RESEARCH
- ADVANCED PHOTONIC DEVICES
- ASTROPHOTONICS
- FIBER OPTICS
- GLASS PROCESSING LAB
- INTEGRATED PHOTONIC EMERGING SOLUTIONS
- INTERSUBBAND OPTOELECTRONICS
- KNIGHT VISION LAB
- LASER PLASMA LABORATORY
- LASER-ADVANCED MANUFACTURING
- LIGHTWAVE ELECTRONICS AND SPECTROSCOPY
- LIQUID CRYSTAL DISPLAYS
- MICROSTRUCTURED FIBERS AND DEVICES
- MID-INFRARED COMBS
- MULTI-MATERIAL OPTICAL FIBER DEVICES
- MULTIPLE QUANTUM WELLS
- NANOPHOTONIC DEVICES
- NANO-OPTICS
- NANOPHOTONIC MATERIALS
- NANOPHOTONICS & NEAR-FIELD OPTICS
- NONLINEAR OPTICS
- OPTICAL CERAMICS
- OPTICAL FIBER COMMUNICATIONS
- OPTICAL IMAGING SYSTEM LABORATORY
- OPTICAL NANOSCOPY
- PHOTOINDUCED PROCESSING
- PHOTONIC STRUCTURES & DEVICES
- PHOTONICS DIAGNOSTICS OF RANDOM MEDIA
- QUANTUM SILICON PHOTONICS
- QUANTUM NONLINEAR PHOTONICS
- SEMICONDUCTOR DIODE LASERS
- SPACE-TIME OPTICS AND PHOTONICS LAB
- THEORETICAL ATTOSECOND SPECTROSCOPY
- ULTRAFAST LASER PROCESSING
- ULTRAFAST PHOTONICS

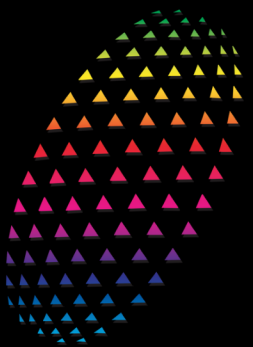
INDUSTRY PARTNERSHIPS

70+

CREOL Industrial Affiliates: companies providing a direct workforce pipeline and research collaboration opportunities

PARTNERING FOR SUCCESS

Industrial Affiliates enjoy close ties with CREOL faculty and students, allowing opportunities for collaboration on research, problem solving, and workforce development.



$20 Trillion: The worldwide value of light-enabled products and services, which means the science and application of light – photonics – represents roughly 19% of the world's economy. *(SPIE 2025 Industry Report)*

ALUMNI

100%

Post-graduation job placement/advanced degree acceptance *(based on student exit surveys)*

Median Starting Salaries

$83,000 Bachelor's
$95,000 Master's
$140,000 PhD

TOP CREOL ALUMNI EMPLOYERS

Amazon
Apple
Google
Intel
L3Harris
Lockheed Martin
Meta
Microsoft
Northrop Grumman
Academia (Postdoc Research)
National Research Labs

(in alpha order; via UCF first destination survey)

CREOL, The College of Optics and Photonics

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FACILITIES

FIBER FABRICATION FACILITY

CREOL owns one of the most unique facilities in the nation to process novel optical fiber materials, and fabricate state-of-the-art fiber-optic devices and systems.

CLEANROOM

The CREOL Nanofabrication Facility (CNF) consists of 3,000 square feet of Class 100 and Class 1000 cleanrooms that are open to companies and other outside users.

OPTICAL MATERIALS LAB

The Optical Materials Laboratory provides 4,000 square-foot of state-of-the-art research laboratories for the fabrication of crystals, optical ceramics, glass and glass-ceramics.

PHOTONICS INCUBATOR

The Photonics Incubator is part of the UCF Business Incubation Program and is located on the UCF campus within the facilities of CREOL

CENTRAL FL RESEARCH PARK

The nation's 7th largest research park is adjacent to UCF and home to more than 145 companies that provide co-ops, jobs, research partnerships and internships.

TISTEF

Part of the Center for Directed Energy the Townes Institute for Science, Technology, and Experimentation (TISTEF) Facility is federally-owned and managed by UCF.

BIOPHOTONICS FACILITY

This shared lab has all the necessary equipment for cell/tissue culture, basic biochemistry and molecular biology including systems for microfluidics fabrication and assembly, UV-VIS spectrometer, biosafety cabinets, carbon dioxide cell incubators, phase contrast microscope, autoclave, ultracentrifuge, PCR thermocycler, freezer, refrigerator, pH meter, electrophoresis systems with gel imager, E.coli shaker and FPLC system.