University College Dublin
Ireland's Global University

ME OPTICAL ENGINEERING
(TWO YEARS FULL TIME)

Between 2014 and 2016 Ireland outpaced the EU28 in the industrial sector of Computer, Electronic, Optical and Electronic Equipment, with an increase of over 56% in net sales value from an already high base.

Optical technologies play key roles in many areas including biomedical imaging, astronomy, quality control, security, sensing and telecommunications. The ready availability of multi-camera mobile phones paves the way for new applications as computational approaches integrate with traditional optical design. Very exciting innovative technologies are rapidly emerging, driven by the ability to display and capture large amounts of real-time optical data. Optical engineers are involved in identifying and designing these systems, with the aim of improving people's lives, generating employment and creating new business opportunities.

PROFESSIONAL WORK PLACEMENTS PROVIDED

Delivered by a highly research-intensive School composed of many internationally high-profile academics including five IEEE Fellows. This two-year programme provides 6-8 months of professional work experience as an embedded element of the programme.

WHY STUDY AT UCD?

Professional Work Experience
6-8 month Professional Work Experience internship opportunity

Tradition
ESTABLISHED 1854

Established 1854, with 160 years of teaching and research excellence

Global profile
TOP 1%

UCD is ranked in the top 1% of higher education institutions worldwide

Global community
Over 8,000 international students from over 139 countries study at UCD

Global careers
Degrees with high employability; dedicated careers support; two-year stay-back visa (for non-EU students)

Safety
Modern parkland campus with 24-hour security, minutes from Dublin city centre

COURSE CONTENT AND STRUCTURE

120 credits taught master's

65 credits taught modules

30 credits work placement

25 credits research project

Core modules include:
- Biomedical Signal Processing
- Optoelectronics
- Biomedical Imaging
- Professional Engineering (Mgt)
- Optical Engineering
- ME Project (Optical)

Project topics are spread across a wide range, but related to and drawing on the topics covered in the taught modules. Similarly, your work placement can involve a variety of roles in a range of different companies in the optical and electronic engineering field.

Please see online for a full list of modules.

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CAREER OPPORTUNITIES

There are excellent job opportunities for optical engineers in the display, lighting, virtual reality, robotic and drone areas. It is a large and expanding area.

Established employers in Ireland include both multinationals and indigenous companies, e.g. Andor, Carl Zeiss, Huawei, Intel/Movidius, Qualcomm, and Sensl, to name but a few.

FACILITIES AND RESOURCES

Modules are taught by faculty-engaged, leading-edge researchers, working in collaboration with nationally and internationally known industrial and academic researchers.

APPLY NOW

This programme receives significant interest so please apply early online at www.ucd.ie/apply

ENTRY REQUIREMENTS

- A 4-year bachelors degree with a minimum upper second class honours (NFQ level 8) or international equivalent in an Electrical, Electronic, Computer or Optical Engineering programme.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.
- Students who do not meet the IELTS requirement may wish to consider taking the Pre-Sessional or Pre-Masters Pathway. Full details https://www.ucd.ie/alc/programmes/pathways/

INTERNATIONAL STUDENTS

- Option to stay in Ireland to seek employment and/or work for 2 years after graduating
- Approved by US Dept of Education for federally supported loans
- Apply for University non-EU Scholarships: www.ucd.ie/global/study-at-ucd/scholarshipsfinances/scholarships/
- Apply for College of Engineering & Architecture non-EU scholarship: www.ucd.ie/eacollege/study/noneuscholarships

RELATED MASTER'S PROGRAMMES OF INTEREST

- MEngSc Electronic & Computer Engineering
- MSc Advanced Software Engineering
- MSc Computer Science NL (Negotiated Learning)
- MSc Digital Investigation & Forensic Computing
- MSc Information Systems

FEES

Fee information is available at www.ucd.ie/fees

STUDENT PROFILE

Jesvin Jimmy

My first encounter with Optics was in the Electronic Engineering bachelor's module – Electromagnetic Waves. I remember being so intrigued to discover the wide range of applications that harnessed the properties of light. Also that summer I had the opportunity to complete a research internship in Karlsruhe, Germany. The exposure there aided me greatly in realising the expanding potential of this career path as it is already revolutionsing solutions in sectors such as communications, health, automobiles and computing. Upon my return, I had an extensive range of module options offered by the schools of physics, chemistry, radiology and medicine. The master's structure suited me perfectly as I didn't want to settle with the traditional engineering modules. My current placement in Maxim Integrated is also proving to be an invaluable experience as I am able to delve deeper into core areas such as power electronics. The perfect blend of modules and experience is already proving to be a great advantage and differentiator.

CONTACT US

EU Students – Katie O'Neill E: eamarketing@ucd.ie T: +353 1 716 1781 W: www.ucd.ie/eacollege

International Students – E: michelle.mathews@ucd.ie/international@ucd.ie T: +353 1 716 8500 W: www.ucd.ie/global