The Telecommunications MRes is a one-year research degree dealing with areas of technology and systems related to telecommunications, communications technology and the next generation of IP support networks. This prestigious programme offers significant research content alongside taught modules strongly linked to industrial requirements.

### Degree summary

Students develop an advanced understanding of the architecture and components that are used to construct a broadband network. The programme offers an overview of the network structures used to build telecommunications networks, enables students to specialise in a specific area of telecommunications, and includes a substantial research project.

UCL Electronic & Electrical Engineering is one of the most highly rated electronic engineering research departments in the UK. It is the oldest in England, founded in 1885. The department has more than a century of tradition of internationally leading research, from Professor Sir Ambrose Fleming, the inventor of the thermionic valve and the left-hand and right-hand rules, to Professor Charles Kao, PhD alumnus and 2009 Nobel Prize in Physics recipient for his research in communication with optical fibres that began whilst studying at UCL.

Our research and teaching ethos is based on understanding the fundamentals and working at the forefront of technology development.

We cover a wide range of areas from materials and devices to photonics, radar, optical and wireless systems, electronics and medical electronics, and communications networks. The programme is delivered through a combination of lectures, seminars, tutorials and workshops. Student performance is assessed through unseen written examination, coursework (written and design assignments) and the substantial research project, which is assessed by dissertation and presentations.

### Accreditation

Accredited by the Institution of Engineering and Technology (IET) on behalf of the Engineering Council as meeting the requirements for Further Learning for registration as a Chartered Engineer. Candidates must hold a CEng accredited BEng/BSc (Hons) undergraduate first degree to comply with full CEng registration requirements.

### Degree structure

**Mode:** Full-time: 1 year  
**Location:** London, Bloomsbury  
Students undertake modules to the value of 180 credits. The programme consists of two core modules (30 credits), three optional modules (45 credits) and a research project (105 credits).

#### CORE MODULES
- Introduction to Telecommunications Networks  
- Professional Development Module: Transferable Skills

#### OPTIONAL MODULES
- Students choose three of the following:  
  - Broadband Technologies and Components  
  - Communications Systems Modelling  
  - Introduction to IP Networks  
  - Mobile Communications Systems  
  - Wireless Communications Principles  
  - Network and Services Management  
  - Optical Transmission and Networks  
  - Software for Network Services and Design  
  - Telecommunications Business Environment  
  - Antennas and Propagation  
  - RF Circuits and Devices  
  - Photonic Sub-systems  
  - Radar Systems  
  - Internet Multimedia Systems

#### DISSERTATION/RESEARCH PROJECT
- All students undertake a substantial research project working in association with one of the research groups at UCL or a collaborating industrial research laboratory, culminating in a dissertation.
Recent graduates have gone on to become university researchers, and senior software engineers and research scientists at companies including Nokia UK Ltd and QinetiQ.

Recent career destinations* include:

// PhD in Engineering, UCL

**Employability**

The Telecommunications MRes programme provides a broad and comprehensive coverage of the technological and scientific foundations of telecommunications networks and services, from the physical layer to the application layer. A strong emphasis is given to mobile and wireless communications and the latest standards in these areas (LTE, WiMAX, IEEE 802 family of standards). Students study both the theoretical foundations of all related technologies but also carry out extensive practical assignments in several related areas.
Entry requirements

A minimum of an upper second-class Bachelor’s degree in a relevant discipline from a UK university or an overseas qualification of an equivalent standard.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Standard.

Information about the evidence required, acceptable qualifications and test providers is provided at: www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

FEES AND FUNDING 2018/19 ENTRY

// UK: £12,380 (FT), £N/A (PT)
// EU: £12,380 (FT), £N/A (PT)
// Overseas: £25,880 (FT), £N/A (PT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Current Students website.

The Institution of Engineering and Technology (IET) awards competitive scholarships for postgraduate study, for details visit www.theiet.org

Please visit the UCL Electronic and Electrical Engineering Scholarships website for more information on funding.

Full details of funding opportunities can be found on the UCL Scholarships website: www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

All applicants: 27 July 2018

Details on how to apply are available on the website at: www.ucl.ac.uk/graduate/apply

CONTACT

Electronic Engineering

Email: mscenquiries@ee.ucl.ac.uk
Telephone: +44 (0)20 7679 7300

EU referendum

For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to www.ucl.ac.uk/eu-referendum