LONDON'S GLOBAL UNIVERSITY

Electronic and Electrical Engineering

Electrical Transport in Nanosystems (ELEC0124)

Description

This course explores electrical transport in devices whose nanoscale dimensions play a key role in dictating their functionality. It focuses on the physical principles underpinning their operation, as well as details of their application. The course is divided into three parts (taught by different lecturers), each dedicated to a distinct class of devices: electronic, spintronic and superconducting devices. The first part focuses on quantum transport in low-dimensional nanodevices such as quantum point contacts and quantum dots; the second part focuses on magnetism in thin films and spintronics; the third part focuses on Josephson junctions and superconducting quantum interference devices.

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	PGT L7, Campus-based
Reading List	View on UCL website
Tutor	Prof Paul Warburton
Term	Terms 1 and 2
Timetable	View on UCL website

Assessment

■ Written examination (main exam period): 100%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

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