The University of Central Lancashire (UCLAN)

There is opportunity to undertake practical training or applied research in collaboration with our industry partners throughout the duration of your study. We offer programmes of study in a broad range of Engineering and computer related areas. We invite professionals seeking continuous development, fresh graduates seeking depth of study or scholars seeking to start career in research (R&D) to join us in extending the frontiers of technology.

The Energy System research area includes renewable energy studies, hybrid renewable and conventional energy systems, energy efficiency and management.

The Mechanical Systems research area emphasizes on the design, analysis and operational excellence of industrial based systems. Recommended research areas:-

- Intelligent Imaging
- Communications
- Sensor Technology
- Energy Utilisation
- Electromagnetic Compatibility (EMC)
- System Level Integration
- Electronic System Design
- Power Electronics
- Power Systems
- RF Systems
- Advanced Database
- Knowledge Management
- E-Business
- Software Engineering
- Multimedia Systems
- Data Comm. & Networking
- Artificial Intelligence

Focus

The external perception and academic credibility of any University is determined by the quality of its research output. UCLan recognises research as one of its most important defining characteristics and the institution is committed to maintaining and growing a productive, well resourced and internationally competitive research community.

The UK Research Funding Councils define research as "original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sectors; scholarship; the invention and generation of ideas, images, performances and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes."

Research at the University contributes across many of our teaching programmes at both undergraduate and postgraduate levels, bringing cutting edge and a contemporary relevance to the student learning experience. The importance of this link within UCLan is demonstrated clearly by the recent creation of the Centre for Research Informed Teaching.

MSc
By Research

School of Computing, Engineering

and Physical Sciences

Faculty of Science and Technology

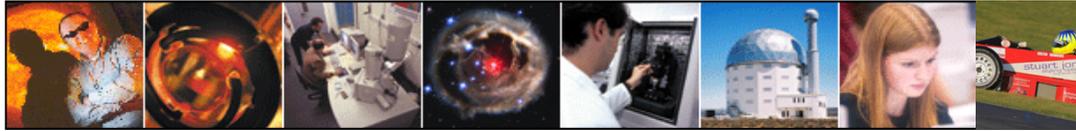**Preston, Lancashire
PR1 2HE**

**Tel: 01772 892400
Tel: 01772 892685**

University of Central Lancashire

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The ideal candidates for these programmes are those that already work within the engineering and computing sector and are encouraged to develop their research in niche areas of the jobs on their current employment. Following areas in which research projects can be supported:

- Power Line Communication
- Sensors, Signals and DSP
- Robotics
- Designing Intelligent Machines
- Embedded Systems
- Mechanical Systems & Engineering Simulations
- Digital Communication Systems
- Electronics Circuits Engineering
- Wind Energy Engineering and Wind Energy Systems
- Virtual Reality and 3D Thinking
- Power Engineering and Power Electronics
- Fuzzy Logic Control and Design Methodology
- Engineering Computation
- Digital Multimedia
- Network Computing
- Computer Communications
- Project Management and Professional Issues
- Analogue Communication
- Space Communications
- Satellite Communications
- RF and Wireless Systems
- Mobile Communication s, Sensors and Control
- Strength and Materials Engineering
- Sustainable Design

The degree involves investigation and evaluation of an approved research topic and the presentation of a dissertation.

MSc By Research Course Summary
Full time 12 Months or Part time 24 Months
The school has extremely good industry links and through this has opportunities for industrial research projects. This is particularly attractive to mature students with industrial experience who wish to augment their qualifications within a specific area, but prefer the greater flexibility that an MSc by Research would offer over a structured taught MSc.

The aim of this programme is to provide Technology based graduates with the opportunity to develop an area of technological expertise through a major research project leading to a master's degree qualification.
It also gives students understanding and skills in the methodology of research and the experience of a critical investigation of an approved topic at a high level.

Entry Requirements At least an upper second class honours degree, or its equivalent, in engineering or a closely related discipline. Applicants who do not meet these criteria but who have significant industrial experience will also be considered subject to individual circumstances.

The English language requirement is **IELTS:** 6.5 or equivalent.

Start date
1st January 2010 or 1st April 2010
Application Deadline
30th October 2009 or 1st February 2010

Sustainable Engineering Related Projects

MSc By Research Project

The project consists of a substantial piece of research work in the area of the student's chosen topic, preferably related to the student's specialisation and employment within the nuclear industry. Projects are also drawn from, and are supportive of, current nuclear related research programmes within the Institute.

Where a student's project is nuclear related and based in nuclear industries, we will seek to appoint an industrial advisor to ensure the brief is agreed and issues such as confidentiality and intellectual property rights are addressed.

Assessment Students are expected to submit an Interim report with a final thesis based on the research project and a paper suitable for publication. There will also be a viva voce exam.

Director of MSc by Research Studies
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