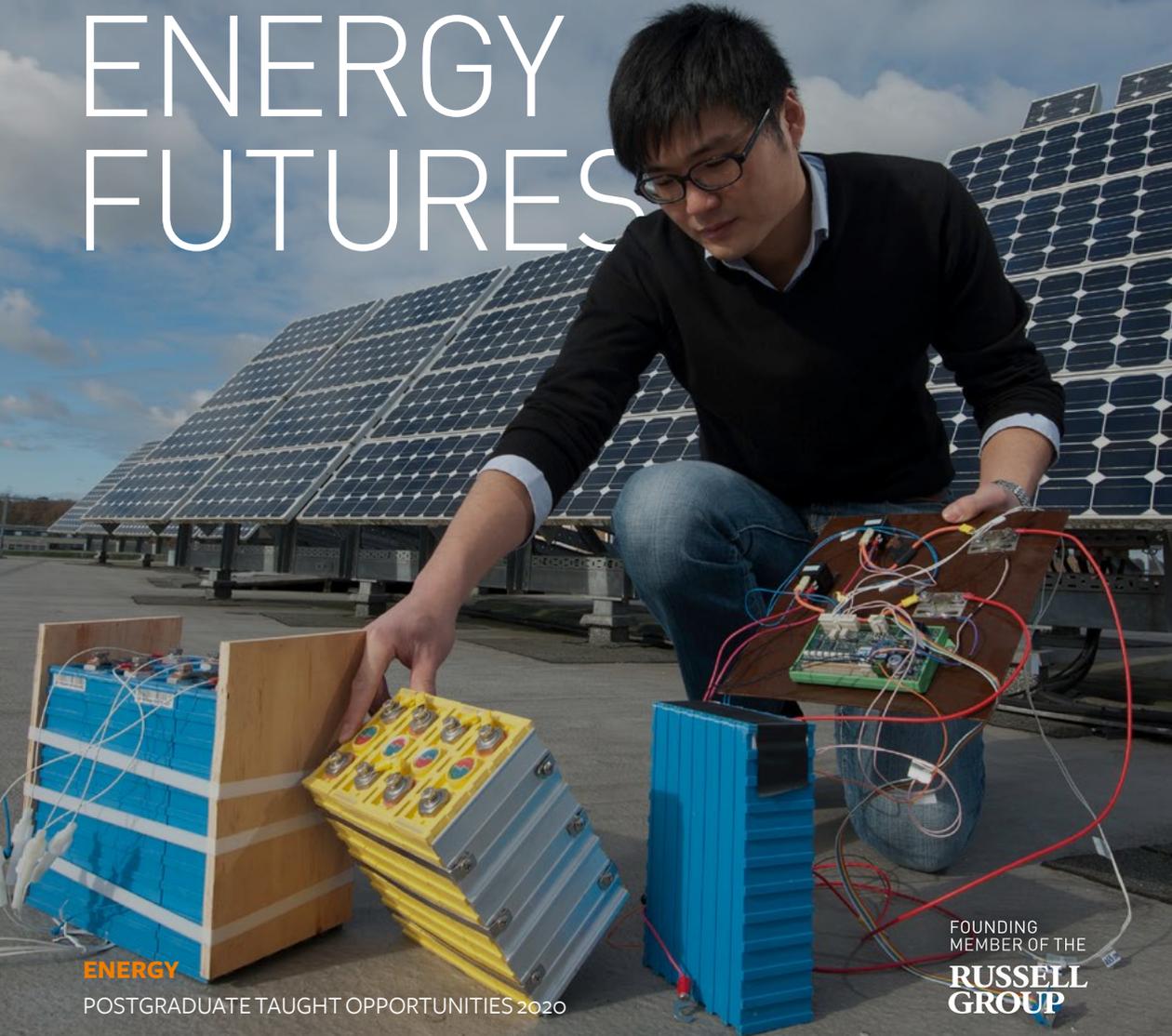


ENGINEERING SUSTAINABLE ENERGY FUTURES



ENERGY

POSTGRADUATE TAUGHT OPPORTUNITIES 2020

FOUNDING
MEMBER OF THE
**RUSSELL
GROUP**

CHOOSE SOUTHAMPTON



Top 100

global university*



Top 20

UK university**



Top 10

in the UK for
research intensity***



1st

for research
power in General
Engineering***

91%

of our research in
General Engineering
is rated as internationally
excellent or of
world-leading quality***



First

in the UK for the volume
and quality of Electrical
and Electronic Engineering
research***

*QS World University Rankings, 2020 ** Complete University Guide, 2020 *** Latest REF, 2014

“I chose this degree because it had the best syllabus and I was impressed that the course was accredited by the Engineering Council. The lecturers were really engaged in their subjects, knew what they were talking about and made everything relevant.”

Eloise Utley

MSc Energy and Sustainability, 2018
Graduate Sustainability Consultant,
AES Sustainability Consultants



Accreditation

MSc Energy and Sustainability: Energy, Environment and Buildings and Energy, Resources and Climate Change:

The Institute of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers*

MSc Energy and Sustainability with Electrical Power Engineering:

The Institute of Engineering Technology*

MSc Sustainable Energy Technologies:

The Institution of Mechanical Engineers**

*As meeting the academic requirement for Further Learning for Chartered Engineer registration.

**The accredited MSc will meet, in part, the exemplifying academic benchmark requirements for registration as a Chartered Engineer.

Candidates must hold a BEng/BSc undergraduate first degree that is accredited for Chartered Engineer (CEng) registration to comply with full CEng registration requirements.

RESEARCH EXCELLENCE

Students at Southampton are offered a vibrant and multidisciplinary research community working with our world-renowned academics and using strong industry links.

Studying problems from a fundamental, technical and applied perspective, our research fully relates to policy, infrastructure, resilience and adaptability. It is underpinned by a common approach of minimising energy requirements and maximising resource efficiency and impact reduction. We have research expertise in:

- Automotive Engineering
- Bioenergy
- Clean Combustion and Carbon Capture
- Climate Change and Coasts
- Energy and Buildings
- Energy and Power Engineering
- Energy for Development
- Fuel Cells and Batteries
- Photovoltaics and Microgrids
- Wave and Tidal



Our research into small-scale electricity generation by wind power has led to a shift away from turbines on urban buildings to more efficient pole-mounted devices in the countryside



We are working on a project to deliver large scale retrofit of domestic buildings to deliver energy savings across UK cities

Our researchers have introduced solar-powered electricity to six African villages, impacting on health, wellbeing and education



Learn alongside experts from the Sustainable Energy Research Group, part of the Energy and Climate Change Research Division



TAUGHT PROGRAMMES

Key facts

Unless otherwise stated

Entry requirements: a UK bachelors degree with upper second-class honours or higher in engineering, mathematics, a physical science or a related subject. See international equivalent qualifications

www.southampton.ac.uk/pg/entry

English language: band B, IELTS 6.5 overall, with a minimum of 5.5 in all components. For more information, visit www.southampton.ac.uk/pg/

Assessment: examinations, presentations, coursework and dissertation

Start date: September

Duration: one year (full time)

Applying: University application form with transcripts and two references

Closing date: 31 July

Fees and funding: Visit www.southampton.ac.uk/pg/fees for programme specific details

As a postgraduate student, you will work with internationally respected academics at the forefront of their disciplines, tackling some of today's biggest challenges. Our excellent facilities, key partnerships with major industries and a world-leading research base will ensure that your time studying with us will be productive, challenging and enjoyable.

All our taught degrees are one-year Master of Science (MSc) programmes. They consist of two semesters of taught modules followed by an individual research project during the summer. The taught modules in the first semester are usually compulsory for the particular MSc stream, while the second semester allows you to select a wide range of optional modules across the spectrum. During the summer project you will work under the supervision of an academic member of staff towards your dissertation.

MSc Energy and Sustainability

The sustainable provision and use of energy is a major challenge of the 21st century. These MSc programmes are designed to equip you to become one of the next generation of energy professionals. Our multidisciplinary approach will enable you to tackle climate change issues, while improving energy supply and the built environment. You will learn to view energy and sustainability challenges from multiple perspectives, which will help you to develop rounded and lasting solutions.

MSc Energy and Sustainability: Energy, Environment and Buildings

Programme Director:
Professor Patrick James

Compulsory modules include:

- Introduction to Energy Technologies, Environment and Sustainability
- Climate Change, Energy and Settlements
- Geographical Information Systems for Environmental Consultants

- Energy Resources and Engineering
- Data Analysis and Experimental Methods for Civil and Environmental Engineering
- Energy Performance Assessment of Buildings
- Climatic Design of Buildings and Cities
- MSc Research Project

Optional modules include:

- one module from either Waste Resource Management or Bioenergy

MSc Energy and Sustainability: Energy Resources and Climate Change

Programme Director:
Professor Patrick James

Compulsory modules include:

- Introduction to Energy Technologies, Environment and Sustainability
- Climate Change, Energy and Settlements
- Geographical Information Systems for Environmental Consultants
- Energy Resources and Engineering
- Data Analysis and Experimental Methods for Civil and Environmental Engineering
- Bioenergy
- Waste Resource Management
- MSc Research Project

Optional modules include:

- one module from either Energy Performance Assessment of Buildings or Climatic Design of Buildings and Cities



Find out more:

T: +44 (0)23 8059 9699

E: enquiry@southampton.ac.uk

TAUGHT PROGRAMMES

MSc Sustainable Energy Technologies

Programme Director:

Dr Carlos Ponce de León Albarrán

Our academically challenging programme will introduce you to incumbent and modern energy technologies for sustainable power generation. During your project you will learn to design and assess the performance of fuel cells and photovoltaic systems, wind power, or hybrid propulsion systems. This course will suit graduates from engineering, scientific, and mathematical backgrounds.

Compulsory modules include:

- Introduction to Energy Technologies, Environment and Sustainability
- Principles of Photovoltaics, Fuel Cells and Batteries
- Sustainable Energy Systems, Resources and Usage
- Advanced Photovoltaics, Fuel Cells and Batteries
- Renewable Energy from Environmental Flows: Wind, Wave and Tide
- Applications of Renewable Energy, Storage and Nuclear Energy
- MSc Research Project

Optional modules include:

Two from:

- Thermofluid Engineering for Low Carbon Energy
- Offshore Engineering and Analysis
- Data Analysis and Experimental Methods for Civil and Environmental Engineering
- Waste Resource Management
- Bioenergy
- Energy Performance Assessment of Buildings
- Advanced Electrical Systems

MSc Energy and Sustainability with Electrical Power Engineering

Programme Director:

Dr Igor Golosnoy

This programme is ideal if you are considering a career in the electrical power industry. It considers aspects of sustainable electricity generation and issues concerned with bulk electrical energy transport to the ultimate user. To design and develop our future energy networks, we must have knowledge and understanding of the current infrastructure.

This programme provides a solid grounding in generation, transmission and distribution engineering, and considers the wider issues of energy, renewable generation and sustainability. The programme is particularly relevant for students considering a career in the electrical power industry.

Compulsory modules include:

- Fundamental Principles of Energy
- Power Generation: Technology and Impact on Society
- Power System Economics
- MSc Research Project and Dissertation
- Project Preparation

Optional modules include:

- Bioenergy
- High Voltage Insulation Systems
- Mechanical Power Transmission and Vibration
- Power and Distribution
- Power Electronics for DC Transmission
- Renewable Energy from Environmental Flows: Wind, Wave and Tide

Additional key facts

Energy and Sustainability with Electrical Power Engineering only

Entry Requirements: a UK bachelors degree with upper second-class honours or higher in electronic/electrical engineering or a closely related subject. Specific module requirements also apply, please refer to the course pages online.

English language: band C, IELTS 6.5 overall, with a minimum of 6.0 in all components.

Assessment: coursework, examinations, written project (design, development or research) and dissertation

Closing date: closed when full, usually May onwards

HOW DO I APPLY?

Before applying for postgraduate taught study, you should:

- check you meet the entry requirements
- if applicable, ensure that you meet any special requirements for international students
- identify how you will fund your postgraduate study
- obtain supporting documentation to include as part of your application

APPLY NOW

Apply to Southampton for postgraduate taught degrees and for more information on PhD opportunities

 **Find out more:**
www.southampton.ac.uk/pg



Find out more:

www.southampton.ac.uk/pgengineering
www.southampton.ac.uk/ecs/msc

UK enquiries:

enquiry@southampton.ac.uk
+44 (0)23 8059 9699

International and EU enquiries:

international@southampton.ac.uk
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