Renewable Energy

MSc/PgDip/PgCert

Climate change, growing populations and limited fossil fuel resources mean that demand for renewable energy continues at an ever-increasing rate. Use of renewable resources and application of renewable energy technologies will play a major role in future energy supply. Renewable energy is now at the heart of every informed discussion concerning energy sustainability, security and affordability. Graduates can expect to go on to a wide range of careers across the industrial and public sector.

Course structure

The taught programme for the Renewable Energy masters is generally delivered from October to February and is comprised of eight modules. The modules are delivered over one week of intensive delivery with a second week being free from structured teaching to allow time for more independent learning and reflection.

Individual project

The individual project is the chance for students to focus on an area of particular interest to them and their future career. Students select the individual project in consultation with the Thesis Co-ordinator and their Course Director. These projects provide students with the opportunity to demonstrate their ability to carry out independent research, think and work in an original way, contribute to knowledge, and overcome genuine problems in the offshore industry. Many of the projects are supported by external organisations.

Group project

The group project is an applied, multidisciplinary, team-based activity. Often solving real-world, industry-based problems, students are provided with the opportunity to take responsibility for a consultancy-type project while working under academic supervision. Success is dependent on the integration of various activities and working within agreed objectives, deadlines and budgets. Transferable skills such as team work, self-reflection and clear communication are also developed.

Future career

With the current worldwide focus on addressing low carbon energy production and renewable energy technologies, graduates of this course can expect to be highly sought after by employers. Successful graduates will have the skills and knowledge to be able to analyse current and future energy needs, and design and implement appropriate solutions, taking into account the social, environmental, technical, regulatory and commercial issues. Graduates can expect to go on to a wide range of careers as professional scientists or engineers in energy production, distribution and demand management across the full breadth of industrial and public sector organisations.

Example modules

There are eight taught modules on this course.

Engineering route compulsory modules:
- Principles of Renewable Energy Technologies,
- Post-Generation Engineering in Renewable Energy,
- Risk and Reliability Engineering,
- Engineering Stress Analysis: Theory and Simulations,
- Management for Technology,
- Energy Systems Case Studies,
- Fluid Mechanics and Loading.

Engineering route elective modules:
- Computational Fluid Dynamics for Renewable Energy,
- Structural Integrity.

Management route compulsory modules:
- Principles of Renewable Energy Technologies,
- Post-Generation Engineering in Renewable Energy,
- Risk and Reliability Engineering,
- Engineering Stress Analysis: Theory and Simulations,
- Management for Technology,
- Energy Systems Case Studies,
- Health Safety Security and Environment,
- Advanced Maintenance Engineering and Asset Management.

Duration:
MSc: Full-time - one year, Part-time - up to three years;
PgDip: Full-time - up to one year, Parttime - two years;
PgCert: Full-time - up to one year, Part-time - two years.

Start date:
Full-time October, part-time throughout the year.

Location:
Cranfield Campus.

Entry requirements:
A first or second class UK Honours degree in a relevant subject or an equivalent international qualification or relevant work experience.

Please visit www.cranfield.ac.uk/entryrequirements for more information. Alternatively, you may be eligible for our Pre-Master's Engineering programme.

ATAS Certificate:
Students requiring a visa to study in the UK may need to apply for an ATAS certificate to study this course.

Contact details

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For further information please visit
www.cranfield.ac.uk/re