



THINKING OF A CAREER IN **MARINE RENEWABLE ENERGY?**

The MSc/MRes Marine Renewable Energy provides a gateway into careers in the growing marine renewables sector by providing a broad background with the opportunity to specialise in environmental, engineering or socio-economic aspects. Graduates will be well-qualified, not just for careers in the marine renewables sector, but also for careers in the broader renewables and marine environmental consultancy fields.



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www.plymouth.ac.uk

The descriptions in this brochure are correct at the time of printing, but the structure and content of our courses are regularly reviewed to reflect current developments. Admissions requirements may be subject to change. For the latest information, and for further details please visit our website www.plymouth.ac.uk



FACULTY OF SCIENCE AND TECHNOLOGY

MSc Marine Renewable Energy MRes Marine Renewable Energy

Duration: one year full time



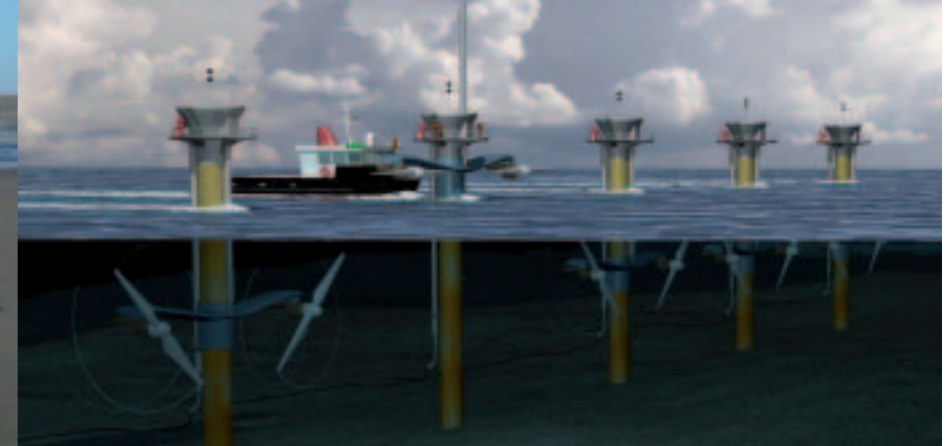
PROGRAMME LEADER AND TEAM

The programme team consists of Professor Paul Russell, Dr Daniel Conley, Dr Deborah Greaves and Dr Dave Simmonds. This four-person team combines experience of running successful masters programmes, with research expertise that achieved ratings of 'world-leading' and 'internationally excellent' in the UK governments most recent Research Assessment Exercise (RAE2008).

INTRODUCTION TO MARINE RENEWABLE ENERGY

The University of Plymouth has an international reputation for marine research and teaching. Backed by the South West Regional Development Agency, the Universities of Plymouth and Exeter have combined to form the Peninsula Research Institute in Marine Renewable Energy (PRIMaRE, www.primare.org). PRIMaRE specifically provides the research support for Wave Hub (www.wavehub.co.uk), a new test facility for arrays of prototype wave energy devices off the north coast of Cornwall.

Building on the PRIMaRE initiative, the University of Plymouth is offering a masters degree in marine renewable energy that is fully cross-disciplinary comprising marine science, engineering, economics, law and policy. The marine renewables, the programme focuses on, are the key emergent marine sectors: offshore wind, wave power and tidal power (both tidal barrages and tidal stream).



WHY STUDY MARINE RENEWABLE ENERGY?

The UK government is committed to a target of 15% of our energy sourced from renewables by 2020. This target is equivalent to a seven-fold increase in UK renewable energy consumption from current levels: the most challenging of any EU Member State. The renewable energy sector will require a rapid expansion with a need for graduates whose skills, knowledge and innovation can help drive that expansion.

Graduates from the programme will gain:

- understanding and awareness of the political framework, policy, planning, technological and scientific issues surrounding and at the limits of knowledge of the marine renewable energy sector

- conceptual abilities to contribute to the development and critical evaluation of specific marine renewable energy technologies
- the skills necessary to assess the environmental impact of marine renewable technologies and to manage the associated planning requirements
- employability skills of direct relevance to the marine renewable energy industries and research organisations, also comprising a commitment to their continuing professional development
- the necessary high level skill set to pursue further academic research or scholarship in marine renewable energy.

KEY FEATURES

- At the forefront of the emerging field of marine renewable energy at a time when such expertise is increasingly sought after
- Builds on the PRIMaRE investment in new staff expertise and facilities
- Fully-integrated with the £42 million wave hub project, the world's largest wave farm, off North Cornwall
- An ideal location to study marine renewables



CAREER OPPORTUNITIES

Quoting from the *Daily Telegraph* on 5 November 2009:

'The renewables industry should be a fertile job market over the next decade, as the UK moves towards the goal of getting 15% of all energy used from renewable sources by 2020 – this is an EU target which is binding on the UK government. A report by energy research consultancy Douglas-Westwood, commissioned by the Government, puts employment in the UK renewables sector today at around 25,000, forecast to rise to 127,000 by 2020.'

The programme in marine renewable energy provides a gateway into careers in this growing industry by providing a broad background with the opportunity to specialise in environmental, engineering or socio-economics aspects. Graduates will be well-qualified, not just for careers in the marine renewables sector, but also for careers in the broader renewables and marine environmental consultancy fields.

The MRes route, with the longer research project, is specifically designed for those who plan to go on to further research and/or study for a PhD. PhD opportunities are available in a wide variety of areas, for example through the university's Centre for Research in Coastal and Ocean Science and Engineering (CCOSE): www.plymouth.ac.uk/research/ccose

PROGRAMME CONTENT

The taught modules in the first period are compulsory and are designed to provide a firm basis for the option modules in period 2.

Period 1:

Students take four modules that provide a broad background in marine renewable energy: introduction to marine renewable energy; economics, law and policy for marine renewable energy, research skills and research methods.

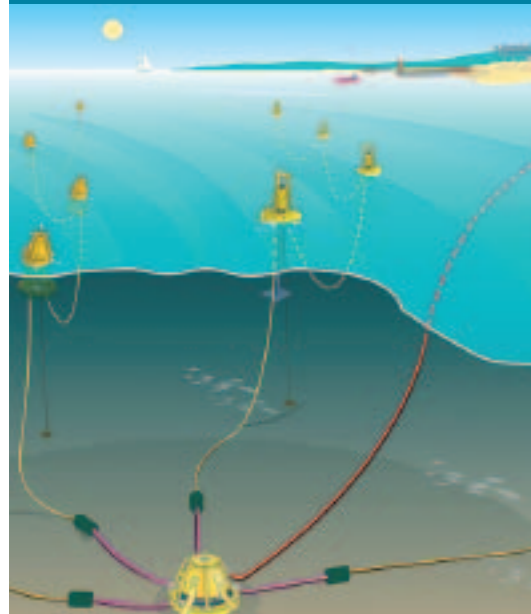
Period 2: (MSc only)

Three options from a choice of five: coastal impacts; marine planning; economics of the marine environment; mechanics of marine renewable energy structures; wave and current modelling for marine renewable energy.

Period 3: (18 weeks) MSc

Periods 2 and 3: (30 weeks) MRes

Research project and dissertation. Due to the extensive staff research expertise there is a wide range of potential projects spanning marine science, engineering and socio-economics. Projects may also be carried out with external organisations that have interests in marine renewable energy.



ENTRY REQUIREMENTS

A good degree in science or engineering, or equivalent. For those with no recent formal qualifications, a lesser qualification with additional experience may be acceptable. For overseas students proficiency in English is required to British Council standards. Applicants are encouraged to enquire about their suitability.