

# FACULTY OF ENGINEERING

## DEPARTMENT OF NAVAL ARCHITECTURE, OCEAN & MARINE ENGINEERING

### WIND & MARINE ENERGY SYSTEMS & STRUCTURES

#### Doctor of Engineering in Wind & Marine Energy Systems & Structures (WAMSS EngD)

*For regulations relating to admissions, duration of study, examinations, progress, final assessment, award and research elements of this degree, please refer to the [General Academic Regulations - Postgraduate Research Degree Regulations](#).*

*For regulations relating to taught (compulsory/optional) modules, please refer to the [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).*

#### **Admission**

1. Notwithstanding the [General Academic Regulations - Postgraduate Research Degree Regulations](#), applicants shall possess:
  - i. a Master's (i.e. MSc) or an Integrated Master's (i.e. MEng) degree; or,
  - ii. a first or upper second class Honours degree from a United Kingdom University; or,
  - iii. other qualifications deemed, by the Head of Department (or nominees) acting on behalf of the Senate, to be equivalent to (i) or (ii) above.
2. In all cases, applicants whose first language is not English shall be required to demonstrate an appropriate level of English.
3. Applicants who satisfy the provisions of Regulation 1 may, in addition, be required by the Head of Department, acting on behalf of Senate, to be an experienced professional working in a relevant area of industry.
4. In all cases, applicants must submit a satisfactory research area or topic.

#### **Duration of Study**

5. 48 months as the minimum period of study, and 60 months as the maximum period of study for full-time EngD (see [General Academic Regulations - Postgraduate Research Degree Regulations](#))

#### **Mode of Study**

6. The programme is available by full-time study only.

#### **Credit Transfer and Recognition of Prior Learning**

7. As permitted by the [Policy on the Recognition of Prior Learning and Credit Transfer](#), the Board of Study may, with the approval of Senate, approve exemption from part of the taught element of the programme for students submitting evidence of appropriate academic attainment or accredited prior experiential learning.

#### **Curriculum**

8. All students shall undertake an approved curriculum as follows:

#### **Compulsory Modules**

Module Code	Module Title	Level	Credits
EE964	Induction Project	5	10
EE965	MRES Dissertation	5	90
EE958	Wind Turbine Technology 1	5	10
EE959	Wind Turbine Technology 2	5	10
EE960	Wind Turbine Control	5	10
BF981	Socio-Economics of Energy Systems	5	10
NM843	Risk and Reliability Engineering	5	10

### **Optional Modules**

Students must take 30 credits chosen from:

Module Code	Module Title	Level	Credits
EE961	Wind Turbine Power Conversion	5	10
EE963	Power Systems and Wind Integration 2	5	10
EE962	Power Systems and Wind Integration 1	5	10
NM842	Offshore Structural Integrity	5	10
NM959	Dynamics of Floating Offshore Installations	5	10
EV939	Environmental Impact Assessment for ORE	5	10
NM978	Physical Testing of ORE Devices	5	10
XX###	Introduction to Offshore Geotechnics	5	10
XX###	Offshore Foundation Design	5	10
XX###	Numerical Analysis for Offshore Geotechnics	5	10
XX###	Advanced Fluid Mechanics for ORE	5	10

9. **First Year** – All students will attend an induction semester (from beginning of October until end of January) at University of Strathclyde, which includes Group Project 1 and 5 taught modules. Upon completion of the induction semester, the students will work part-time on Group Project 2 (from beginning of February until end of September) and they will commence their EngD research project in parallel. Research projects are allocated to students from an approved list prior to the completion of the induction semester and the normal supervisory and progression requirements for doctoral awards apply (see [General](#)

[Academic Regulations - Postgraduate Research Degree Regulations](#)).

10. **Second, Third and Fourth Years** - All students continue their doctoral research projects in the remaining years of the EngD. Moreover, the students will study 3 optional modules throughout the rest of their doctoral programme.

#### **Examination, Progress and Final Assessment**

11. Candidates are required to pass coursework and/or oral examinations and to perform to the satisfaction of the Board of Examiners in the taught component of the programme. In addition, students must satisfy the general regulations associated with the award of a doctoral research degree as specified in the [General Academic Regulations - Postgraduate Research Degree Regulations](#).
12. Candidates will be expected to attain minimum 180 credits, from Group Projects 1 & 2 as well as compulsory and optional modules, during the doctoral programme before being permitted to submit their EngD thesis.
13. Candidates who fail to satisfy the Board of Examiners in any taught module shall be permitted one further attempt to pass the relevant module(s) normally in the same academic year. The Board of Examiners will determine whether the resit should take the form of an examination or an assignment.

#### **Award**

14. **Degree of EngD:** In order to qualify for the award of the degree of EngD in Wind & Marine Energy Systems & Structures, a candidate must have performed to the satisfaction of the Board of Examiners and must have accumulated no fewer than 180 credits from the taught element in Years 1-4. In addition, a student must perform satisfactorily in an oral examination based on a piece of original research submitted to the University of Strathclyde in the form of a portfolio or thesis as specified in the [General Academic Regulations - Postgraduate Research Degree Regulations](#).

#### **Transfer**

15. A candidate who fails to satisfy the progress or award requirements of the EngD may be transferred to the MSc in Offshore Wind Energy.