

## **ADVANCED MECHANICAL ENGINEERING (MSc/PgDip/PgCert)**

**57H300B1/61H300VX/62H300VZ**

*Duration:* MSc 12 months full-time; PgDip 9 months full-time; PgCert 4 months full-time

The course can be studied full-time on campus

*Content:* This programme emphasises the application of advanced techniques and packages to solve complex engineering problems. It offers students a broad range of subjects across the mechanical engineering disciplines in order to work in various industrial sector

Candidates shall be required to attend the following designated programme of courses:

### Stage 1

EG501V Computational Fluid Dynamics (15 credit points)  
EG501S Numerical Simulation of Waves (15 credit points)  
EM501Q Advanced Composite Materials (15 credit points)

*Plus one from the following:*

EG5071 Fire and Explosion (15 credit points)  
EG50T9 Structural Vibrations (15 credit points)  
EG5067 Project Management (15 credit points)

### Stage 2

EG55M1 Finite Element Methods (15 credit points)  
EG551T Mathematical Optimisation (15 credit points)  
EG55P6 Engineering Risk and Reliability Analysis (15 credit points)

*Plus one from the following:*

EG55F9 Riser Systems and Hydrodynamics (15 credit points)  
EG552U Marine and Wind Energy (15 credit points)

### Stage 3

EG59M9 Individual Project in Advanced Mechanical Engineering (60 credit points)

*Assessment:* By a combination of written examination and course work as prescribed for each course. In addition MSc candidates must submit a dissertation on their individual project, and may be required to undergo an oral examination. The Degree of MSc shall not be awarded to a candidate who fails to achieve a CGS Grade of D3 or above in the individual project, irrespective of their performance in other courses.