



BEng Honours Degree in Mechatronics

Be part of the cutting edge of future technology

This programme addresses different elements of mechatronics systems such as the principles of core mechanical engineering, signal conditioning, sensors, actuators, microcontrollers and programmable logic controllers. The programme has been designed to give graduates the integrated technological skills needed to meet the needs of inter-connected industries.

Programme

Mechatronics has become an established engineering discipline designed to give you a broad engineering education, integrating classical engineering disciplines such as mechanical engineering, electronic engineering, computing and control engineering. It also involves the design, production and maintenance of high technology consumer and industrial products as diverse as robotics, automotive anti-lock braking systems and modern manufacturing processes. It provides you with multi-disciplinary skills to enable you to respond to the future needs of industry in a world of rapidly developing technology.

Placement

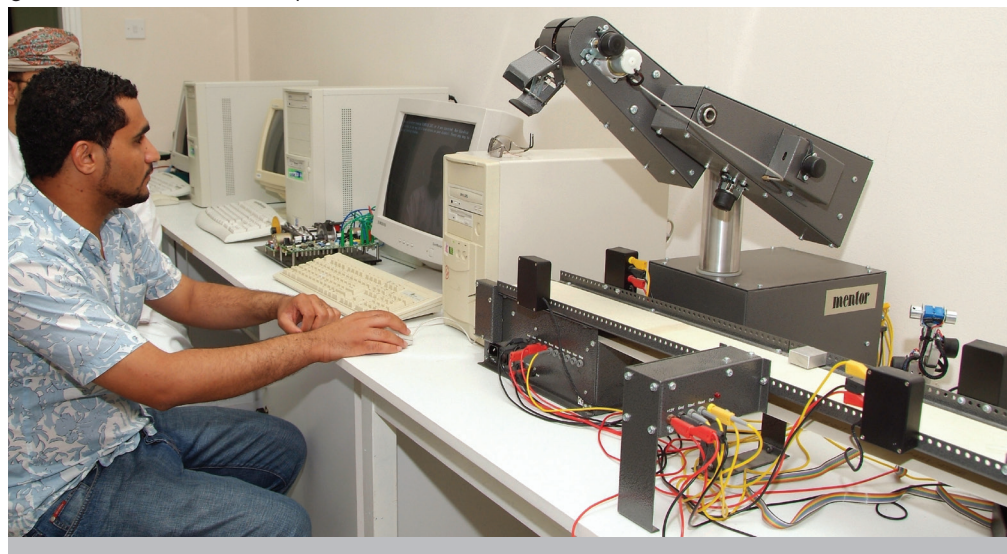
Placement opportunities are

provided to support the objectives of the programme, giving you the chance to relate the theory to a practical context. Through this programme, you will have the chance to work in oil and gas industries, for example, or

as mechatronics instrumentation engineers in local companies.

Career Opportunities

There is a great demand for qualified mechatronics engineers



in sophisticated and modern industries including oil and gas, petroleum and automobile industries. Employment opportunities exist in a wide variety of public and private industries where machinery is controlled by electronics and software. Typical employment opportunities exist in design, development, research, manufacture and maintenance, and automation and operational performance of electro-mechanical systems.

Awards

Students who successfully complete this programme will be eligible for an internationally recognised Honours Degree awarded by Glasgow Caledonian University,

Scotland, UK. Two exit options are available as given below:

- On successful completion of Level 2: Award of University Diploma
- On successful completion of Level 4: Award of BEng Honours Degree

Level 2 is equivalent to Diploma (Oman) and BEng Honours Degree awarded after Level 4 is equivalent to Bachelor Degree in Engineering (Oman), conforming to the Oman Qualifications Framework.

The Diploma awarded after



Modules

Credits	Level 1 – Total of 140 Credits
10	Engineering Computing
20	Mechanical Principles
10	Engineering Materials
20	Technical Communication
10	Engineering Graphics
20	Circuit Theory and Analysis
20	Technical Mathematics 1
20	Electro-Mechanical Workshop
10	<i>Energy and Environmental Science</i>
	<i>English for Engineers – I</i>

Credits	Level 3 – Total of 140 Credits
20	Entrepreneurial Skills Development
20	Control Systems
20	Advanced Mathematics
10	Instrumentation and Control Lab
20	Microcontroller and Applications
20	Power Electronics
10	Microcontroller Lab
10	Mechatronics Case Studies
10	Quality Assurance

Credits	Level 2 – Total of 140 Credits
20	Computer Aided Engineering
20	Electronic Engineering
20	Mechatronics
10	Fluid Mechanics
20	Technical Mathematics 2
20	Employability Skills Development
10	Component Design
20	Non-Technical Electives
	<i>English for Engineers –II</i>
	<i>Industry Orientation Prog</i>
	<i>Exit with Diploma</i>

Credits	Level 4 – Total of 140 Credits
10	Research Methodology
10	Industrial Internship
20	Digital Signal Processing
20	Electronic Design
10	Machine Condition Monitoring
20	Control Engineering
20	Technical Elective
20	Technical Project (Engineering)
10	Automation Lab
	<i>Exit with Bachelor of Engineering (Honours) in Mechatronics</i>

