

Overview

Programme Code	36459
Programme Title	Mechatronics and Autonomous Systems
Awarding Institution	Liverpool John Moores University
Programme Type	Top-up
Programme Leader	
Link Tutor(s)	Clifford Mayhew

Partner Name	Partnership Type
Auston College Myanmar, Yangon, Myanmar	Franchised

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Engineering with Honours - BGH	See Learning Outcomes Below

Alternate Award Names	
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External Benchmarks

Subject Benchmark Statement	UG-Engineering (2019)
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Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	February	Auston College Myanmar, Yangon, Myanmar	1 Years
Full-Time, Face to Face	June	Auston College Myanmar, Yangon, Myanmar	1 Years
Full-Time, Face to Face	September	Auston College Myanmar, Yangon, Myanmar	1 Years

Aims and Outcomes

Educational Aims of the Programme

The BEng. programme in Mechatronics and Autonomous Systems is designed to develop a high level of technical expertise together with the emotional intelligence to be able to practice successfully as a professional engineer in a modern interdisciplinary engineering environment. New graduate engineers are increasingly expected to take on important technical leadership and management responsibilities early in their careers and the knowledge and skills gained from this programme are designed to produce graduates who are able to make an immediate contribution to their employers' organisations. The programme aims to: Provide a programme of study that develops core knowledge and understanding of engineering principles, mathematics, and computation appropriate to the field of Mechatronics and Autonomous Systems. Enable students to develop specialist knowledge, intellectual and practical skills that will enable them to analyse, investigate and develop robust solutions to Mechatronics and Autonomous Systems problems. Develop relevant study and personal skills so that students progressively take responsibility for their learning, becoming, independent learners, while receiving appropriate tutoring and support. Equip students with a range of transferable skills and attributes in the use of computers, software packages, team working, communication, time management and problem solving methodology that will enable them to undertake responsible roles in industry and commerce. Provide a degree programme that meets the needs of industry. Develop students to work in and manage teams, and work independently at managerial level utilising project management and technical skills. To encourage students to engage with the development of employability skills by completing a self-awareness statement.

Learning Outcomes

Code	Description
PLO1	Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology.
PLO2	Communicate in English about engineering topics.
PLO3	Present and discuss proposals.
PLO4	Demonstrate personal and social skills.
PLO5	Comply with relevant codes of conduct.
PLO6	Manage and apply safe systems of work.

Code	Description
PLO7	Undertake engineering activities in a way that contributes to sustainable development.
PLO8	Carry out and record CPD necessary to maintain and enhance competence in own area of practice
PLO9	Exercise responsibilities in an ethical manner
PLO10	Engage in the creative and innovative development of engineering technology and continuous improvement systems.
PLO11	Identify potential projects and opportunities.
PLO12	Conduct appropriate research, and undertake design and development of engineering solutions.
PLO13	Manage implementation of design solutions, and evaluate their effectiveness.
PLO14	Plan for effective project implementation.
PLO15	Plan, budget, organise, direct and control tasks, people and resources.
PLO16	Lead teams and develop staff to meet changing technical and managerial needs.
PLO17	Bring about continuous improvement through quality management.

Programme Structure

Programme Structure Description

Programme Structure - No credit points	
Level 5 - 60 credit points	
Level 5 Core - 60 credit points	CORE
[MODULE] 5508ELEM Mechatronics Approved 2022.01 - 20 credit points	
[MODULE] 5505ELEM Control System Design and Analysis Approved 2022.01 - 20 credit points	
[MODULE] 5512ELEM Applied Instrumentation Approved 2022.01 - 20 credit points	
Level 6 - 120 credit points	
Level 6 Core - 120 credit points	CORE
[MODULE] 6565ELEM Industrial Management Approved 2022.01 - 20 credit points	
[MODULE] 6500ELEM Automation Approved 2022.01 - 10 credit points	
[MODULE] 6512ELEM Process Control Approved 2022.01 - 20 credit points	
[MODULE] 6513ELEM Autonomous Systems and Machine Learning Approved 2022.01 - 20 credit points	
[MODULE] 6556ELEM Mechatronics and Autonomous Systems Project Approved 2022.01 - 40 credit points	
[MODULE] 6513MECHMM Dynamics and Control Approved 2022.01 - 10 credit points	

Module specifications may be accessed at <https://proformas.ljmu.ac.uk/Default.aspx>

Approved variance from Academic Framework Regulations

Variance

This programme has a variance to the Academic Framework, approved in October 2018, in order to satisfy the requirements for Institution of Engineering & Technology (IET) accreditation. The variance is as follows: At level 5 and level 6, a component pass mark of 30% will be applied to any component that contributes more than 30% of a module. At level 7 a component pass mark of 40% will be applied to any component that contributes more than 30% of a module.

Teaching, Learning and Assessment

Teaching and learning: Lectures Tutorials Laboratory work Group projects Individual projects Individual and group presentations Poster presentation Design, build and test exercises Computer programming exercises On line formative quizzes Assessment: Written examinations On line summative quizzes Group design projects and reports Individual projects and reports Poster display Laboratory logbook

Entry Requirements

Type	Description
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Alternative qualifications considered	.
Other international requirements	Applicants with the following qualifications may be admitted to the programme: - Auston Higher Diploma in Engineering Technology; - Auston Higher Diploma in Mechanical Engineering (with appropriate electives); - Higher National Diploma in a relevant field such as Electrical & Electronic Engineering, Mechanical Engineering, Mechatronics, or similar; - Other recognized local qualifications that will be individually assessed in consultation with the Link tutors