

MODULE DESCRIPTOR

Module Title

Introduction to Industrial Control

Reference	EN1104	Version	4
Created	April 2023	SCQF Level	SCQF 7
Approved	July 2018	SCQF Points	30
Amended	August 2023	ECTS Points	15

Aims of Module

To provide the student with the knowledge and skills required to carry out basic practical work appropriate in an engineering context.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Identify a control loop assembly drawing and related devices.
- 2 Relate continuous improvement and its quality management to a control loop assembly.
- 3 Carry out the ability to follow safe working procedures and functional safety appropriately including holistic and proportionate approach to the mitigation security risks.
- 4 Convey the understanding of assembly, commission, and verification of control loop operability in an appropriate form.

Indicative Module Content

Assembly drawings, loop diagrams, process control diagrams, interpretation of P&IDs. Schematics. Identification of relevant equipment. Verification of operability of equipment. Safe working.

Module Delivery

The module is delivered in Blended Learning mode using structured online learning materials/activities and directed study, facilitated by regular online tutor support. Workplace Mentor support and work-based learning activities will allow students to contextualise this learning to their own workplace. Face-to-face engagement occurs through annual induction sessions, employer work-site visits, and modular on-campus workshops.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	30	N/A
Placement/Work-Based Learning Experience [Notional] Hours	240	N/A
TOTAL	300	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>	240	

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	60%	Outcomes Assessed:	1, 2, 3
Description:	Logbook and reflective statement.				

Component 2

Type:	Practical Exam	Weighting:	40%	Outcomes Assessed:	4
Description:	Oral presentation.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The module has 2 components and to gain an overall pass a minimum D grade must be achieved in each component. The component weighting is as follows: C1 is worth 40% and C2 is worth 60%.

		Practical Exam:						
		A	B	C	D	E	F	NS
Coursework:	A	A	A	B	B	E	E	
	B	B	B	B	C	E	E	
	C	B	C	C	C	E	E	
	D	C	C	D	D	E	E	
	E	E	E	E	E	E	F	
	F	E	E	E	F	F	F	
NS		Non-submission of work by published deadline or non-attendance for examination						

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 CORRIOU, J., 2018. Process Control: Theory and Applications. 2nd ed. Springer International Publishing.
- 2 K. T. Dutton, 1997. The art of control engineering. Harlow: Addison-Wesley.
- 3 SKELTON, B, 1997. Process safety analysis: an introduction. Warwickshire [England], Institution of Chemical Engineers.
- 4 Blevins, Terrence L., and Mark Nixon. 2011. Control loop foundation batch and continuous processes. Research Triangle Park, N.Y. : International Society of Automation.
- 5 Instrument Society of America. 1984. Instrumentation symbols and identification: standard.
- 6 Turton, R., Shaeiwitz, J. A., Bhattacharyya, D., & Whiting, W. B. (2018). Analysis, synthesis, and design of chemical processes.