Modification of a Programme and Micro-Credential Validation

Differential Validation and Micro-credential Panel Report

Programme Reference Number:	M018 and MC002 - MC005
Faculty/School(s):	School of Engineering
Department(s):	Department of Mechanical and Industrial Engineering

Details of Programme(s) Reviewed

Title:	Certificate in Industrial Automation
Type of Award:	Special Purpose Award
NFQ Level:	07
ECTS:	30
ISCED:	0714-Electronic and automation
Duration:	1 year
Proposed Start Date:	September 2024
Delivery Mode(s):	Blended

Micro-credential Name:	Industrial Automation 1
NFQ Level:	06
ECTS:	05
ISCED:	0714-Electronic and automation
Duration:	1 semester
Proposed Start Date:	September 2024
Delivery Mode(s):	Blended

Micro-credential Name:	Industrial Automation 2
NFQ Level:	06
ECTS:	05
ISCED:	0714-Electronic and automation
Duration:	1 semester
Proposed Start Date:	September 2024
Delivery Mode(s):	Blended

Micro-credential Name:	Applied Robotics 1
NFQ Level:	07
ECTS:	05

ISCED:	0714-Electronic and automation
Duration:	1 semester
Proposed Start Date:	September 2024
Delivery Mode(s):	Blended

Micro-credential Name:	Applied Robotics 2
NFQ Level:	07
ECTS:	05
ISCED:	0714-Electronic and automation
Duration:	1 semester
Proposed Start Date:	September 2024
Delivery Mode(s):	Blended

Date of Review	13 March 2024

Review Panel

Panellist Role	**Name**	**Role and Department**
Chair	Michael Barrett	Head of Faculty
Quality Office Representative	Declan Courell	Assistant Registrar
Faculty Academic Planning Committee Representative	John Kelleher	Head of Computing & Electronic Engineering
Faculty Academic Planning Committee Representative	John Hanahoe	Senior Lecturer
Representative from Industry	Padraig Madden	Boston Scientific (External Panel Member)
Secretary	Declan Courell	Assistant Registrar

In attendance

Des O'Reilly
Gabriel Farragher
Jack Saad

Proposed Changes

The proposal is to:

1) Break the Industrial Automation 10 credit module into 2 modules so they can be offered as Micro-credentials. Make the second module an elective
2) Replace the 10 credit Networking Technology by the 5-credit module of the same name available in the B.Eng. in Automation and Robotics and make it an elective
3) Add two 5 credits modules on Robotics: Applied Robotics 1 and Applied Robotics 2 - the first one as a mandatory and the second one as an elective
4) Validate 4 taught modules as micro credentials.

Programme Schedule

If the proposed change results in a change to the programme schedule describe these below and/or highlight changes in attached version of proposed APS (downloaded from Academic Module Manager):

Approved schedule

Approved Programme Schedule - GA_EINAG_S07 Certificate in Industrial Automation
Stage 1

Delivery	Code	Module Title	Level	Credit	M/E	BL	BL IL	CA	PJ	PC	FE	Total
SEM 1	ELEC06016	Industrial Automation	06	10	M	6.00	0.00	70	0	30	0	100
SEM 2	ELEC06017	Networking Technology	06	10	M	6.00	0.00	50	0	0	50	100
SEM 2	ELEC07109	Applied Project - Engineering	07	10	E1	4.00	0.00	100	0	0	0	100
SEM 2	PLAC07029	Work Placement - Engineering (10)	07	10	E1	0.33	0.00	100	0	0	0	100
		Credit Total		40								

Area Effective Term	Credits Required	Award Classification Percentage
202200	30	100 %

Elective Rule Name	Rule Type	Electives Required	Credits Required
ELECTIVE_1	Credit		Select 10 Credit(s).

Proposed schedule

Approved Programme Schedule - GA_EINDU_S07 Certificate in Industrial Automation
Stage 1

Delivery	Code	Module Title	Level	Credit	M/E	BL	BL IL	CA	PJ	PC	FE	Total
SEM 1	ELEC06023	Industrial Automation 1	06	05	M	4.00	3.00	70	0	30	0	100
SEM 1	ELEC07112	Applied Robotics 1	07	05	M	4.00	3.00	70	0	30	0	100
SEM 2	ELEC06022	Industrial Automation 2	06	05	E1	4.00	3.00	70	0	30	0	100
SEM 2	ELEC07113	Applied Robotics 2	07	05	E1	4.00	3.00	70	0	30	0	100
SEM 2	ELEC06014	Networking Technology	06	05	E1	4.00	0.00	50	0	0	50	100
SEM 2	ELEC07109	Applied Project - Engineering	07	10	E2	4.00	0.00	100	0	0	0	100
SEM 2	PLAC07029	Work Placement - Engineering (10)	07	10	E2	0.33	0.00	100	0	0	0	100
		Credit Total		45								

adding and/or replacing modules to the programme schedule clearly indicate so in the table below:

Stage	Semester	Module Being Added Code and Name	Module Being Removed Code and Name
	1	Industrial Automation	ELEC06016
	2	Networking Technology	ELEC06017

A changing field

Automation is a fast-changing field and Robotics is an integral part of Industrial Automation and should be part of the level 7 Certificate in Industrial Automation.

More flexibility and progression

The programme board has been approached by industry to deliver micro-credentials in PLC and Robotics that would offer opportunities for progression. The industry partner confirmed that Robotics is now central to automation. With this proposal students can take micro-credentials to build up credits towards the Industrial Automation certificate, and also build credits toward the BEng in Automation and Robotics (possible 25 credits). The industry partner is proposing to register 20 students on the two mandatory modules once approved.

Delivery	Code	Module Title
SEM 1	ELEC06023	Industrial Automation 1
SEM 1	ELEC07112	Applied Robotics 1
SEM 2	ELEC06022	Industrial Automation 2
SEM 2	ELEC07113	Applied Robotics 2
SEM 2	ELEC06014	Networking Technology

In particular, the modules correspond to the BEng in Automation & Robotics as follows:

1) Industrial Automation 1&2 modules are equivalent to the 10 credit Automation 2 ELEC06013.
2) Applied Robotics 1&2 modules are equivalent to the 10 credit Industrial Robotics ELEC07107.
3) Networking Technology module is the same.

Increase viability

This proposal will allow the micro-credentials, the Certificate, and the B.Eng. in Automation & Robotics to share delivery and therefore to offer the micro-credentials or the Certificate even if there is low demand.

The proposed changes modernise the Certificate. It is more attractive and more useful to industry and to students.

Additional Resources Required

Are additional resources required to implement the proposed change(s)? If so, provide details. Note: Additional approval from the UPT Academic Programme Provisions Committee is required when the changes will require additional resources for delivery.	The APS shows an additional 2 hour average per week, but this programme will share hours with the BEng in Automation and Robotics so no additional resources are envisaged.

Overall Finding

Approved to Proceed to Academic Council	**X**

Recommendations

- Provide further details on the operation of elective modules
- Correct programme schedule
- Fix typos and Grammatical errors in document
- Ensure that repeat assessments are aligned with the 10 ECT module of the same title
- Reflect on CA workload associated with 5 ECT module
- Required Reading: Include more recent publications if available

Report Approval

This report has been agreed by the evaluation panel. The minor changes recommended by the committee have been addressed appropriately.

Signed:  Name:- Dr. Michael Barrett Validation Panel Chair	Date:- 14th March 2024