FIELD ENGINEERING AND TECHNOLOGY

Review of *Industrial Measurement and Control* unit standards

Subfield	Domain	Id
Industrial Measurement and Control	Industrial Measurement and Control - Maintenance	19233-19237
	Industrial Measurement and Control - Theory	19238-19246

The ElectroTechnology Industry Training Organisation (ETITO) has completed the review of the unit standards listed above.

Date new versions published **August 2009**

Planned review date **December 2015**

Summary of review and consultation process

Meetings involving ETITO, industry representatives, and other key stakeholders were convened through 2008 and 2009 to undertake the review of Industrial Measurement and Control unit standards that comprise the National Certificate in Industrial Measurement and Control (Level 5) [Ref: 0976].

The consultation groups considered the following:
- the currency of the unit standards and their suitability for existing and future qualifications
- the appropriateness of unit standards to their domain
- the assessability of the unit standards
- the accuracy and appropriateness of their content for existing and future skill needs
- levels and credits match the performance outcomes and training needs
- any skill and/or knowledge gaps that could be captured through the review of existing unit standards or the development of new unit standards.

Main changes resulting from the review

- Purpose statements were amended to accommodate changes to the elements.
- Special notes were amended to updated references and legislation.
- Elements and performance criteria were amended to improve clarity and consistency and bring the unit standards up to date.
- Range statements were amended to clarify evidence requirements.
- Four new unit standards (25885-25888) were developed.
- Unit standards 19236-19240, and 19242-19246 were designated category D.

Unit standards categorised as category D expire at the end of December 2012.

Impact on existing provider accreditations

None.

Impact on Accreditation and Moderation Action Plan (AMAP)

AMAP 0003 has been updated to reflect the changes.

Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following ETITO qualification is affected by the outcome of this review and will be revised in 2009. The items that generated the affected status are listed in **bold**.

Qualification title	Classification or standard in the qualification
National Certificate in Industrial Measurement and Control (Level 5) [Ref: 0976]	**19236-19246**

Review Categories and changes to classification, title, level, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**. For D category unit standards, suggested alternatives are in italics, where appropriate.

Key to review category

A Dates changed, but no other changes are made - the new version of the standard carries the same Id and a new version number

B Changes made, but the overall outcome remains the same - the new version of the standard carries the same Id and a new version number

C Major changes that necessitate the registration of a replacement standard with a new Id

D Standard will expire and not be replaced

Domain Industrial Measurement and Control - Maintenance

Id	Title	Level	Credit	Review Category
19233	Describe and explain the operation, measurement, and control of an industrial process **Demonstrate knowledge of the operation, measurement, and control of an industrial process**	5	10	B
19234	Diagnose and correct faults in measurement and control systems **Diagnose and correct faults in industrial measurement and control systems**	5	10	B
19235	Maintain and manage specialist analytical equipment used in industrial processes	5	10	A

Id	Title	Level	Credit	Review Category
19236	Configure, test, and commission a distributed control system	5	10	D
25886	*Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems*	*5*	*15*	
19237	Maintain complex control systems	5	10	D
25886	*Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems*	5	*15*	

Domain Industrial Measurement and Control - Theory

Id	Title	Level	Credit	Review Category
19238	Demonstrate knowledge of thermodynamics and heat transfer	5	8	D
25887	*Demonstrate knowledge of process theory for industrial measurement and control processes and applications*	*5*	*15*	
19239	Demonstrate knowledge of fluid mechanics for industrial measurement and control	5	8	D
25887	*Demonstrate knowledge of process theory for industrial measurement and control processes and applications*	*5*	*5*	
19240	Demonstrate knowledge of physical and chemical processes used in industry	5	8	D
25887	*Demonstrate knowledge of process theory for industrial measurement and control processes and applications*	*5*	*15*	
19241	Demonstrate knowledge of safety-related instrumentation systems **Demonstrate knowledge of safety and compliance for industrial measurement and control systems**	5	8 **10**	B
19242	Demonstrate knowledge of earthing, shielding, and surge protection of industrial equipment	5	8	D
25886	*Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems*	*5*	*15*	
19243	Select, size, and specify control valves for simple process applications	5	8	D
25885	*Demonstrate knowledge of the selection and specification of equipment for industrial measurement and control systems*	*5*	*15*	
19244	Select, size, and specify flowmeters for simple process applications	5	8	D
25885	*Demonstrate knowledge of the selection and specification of equipment for industrial measurement and control systems*	*5*	*15*	

Id	Title	Level	Credit	Review Category
19245 *25886*	Design, test, and configure industrial data communication systems *Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems*	6 *5*	8 *15*	D
19246 *25886*	Describe and implement SCADA/HMI systems *Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems*	6 *5*	8 *15*	D
25885	**Demonstrate knowledge of the selection and specification of equipment for industrial measurement and control systems**	**5**	**15**	**New**
25886	**Demonstrate knowledge of control system hardware and interfaces for industrial measurement and control systems**	**5**	**15**	**New**
25887	**Demonstrate knowledge of process theory for industrial measurement and control processes and applications**	**5**	**15**	**New**
25888	**Demonstrate knowledge of process theory for industrial measurement and control systems**	**5**	**5**	**New**