



# Process Engineering Maintenance (QCF)

These QCF qualifications will provide recognition of the skills, competence and knowledge of individuals who work in process engineering maintenance. There are qualifications available at Levels 2 and 3 to allow for progression.

Document detail:

## Level 2 NVQ Certificate in Process Engineering Maintenance (QCF)

- Electrical Pathway - 28 Credits
- Instrument and Control Pathway - 28 Credits
- Mechanical Pathway - 28 Credits

## Level 3 NVQ Diploma in Process Engineering Maintenance (QCF)

- Electrical Pathway - 65 Credits
- Instrument and Control Pathway - 65 Credits
- Mechanical Pathway - 65 Credits

Who are the Qualifications for:

### Level 2

This qualification provides recognition of the skills and knowledge of individuals working in a processing engineering environment. It covers reinstating the work area after completion of maintenance; contributing to handover of process plant and equipment; contributing to dealing with hazards and maintaining effective working relationships.

### Level 3

This qualification provides recognition of the skills and knowledge of individuals working in a process engineering environment. It covers carrying out handover of process engineering plant and equipment; reinstating the work area after the completion of maintenance; working safely and minimising risks; and maintaining effective working relationships.

NVQ Certificate in Process Engineering Maintenance (QCF)	Level 2	28 Credits
	501/0209/6	
Last Registration Date	31 <sup>st</sup> May 2015	
Last Certification Date	31 <sup>st</sup> May 2017	

This qualification contains the following Pathways: Electrical, Instrument and Control, Mechanical.

For each Pathway: 16 Units totalling a minimum of 28 Credits are required.

Learners must complete all common Mandatory Units, 2 Pathway-specific Mandatory Units, 2 Units from Option Group 1 and 4 Units from Option Group 2. Knowledge and competence units must be taken in combination i.e. if unit C2.05k is chosen, unit C2.05c must also be completed; and vice-versa.

#### Mandatory Units

- C2.01c Reinstatement the Work Area after Completing the Maintenance of Process Plant and Equipment - 2 Credits
- C2.01k How to Reinstatement the Work Area after Completing the Maintenance of Process Plant and Equipment - 2 Credits
- C2.02c Contribute to Handover of Process Plant and Equipment - 2 Credits
- C2.02k How to Contribute to Handover of Process Plant and Equipment - 2 Credits
- C2.03c Contribute to Dealing with Hazards Within a Process Engineering Environment - 2 Credits
- C2.03k How to Contribute to Dealing with Hazards Within a Process Engineering Environment - 2 Credits
- C2.04c Maintain Effective Working Relationships within Process Engineering Maintenance - 1 Credit
- C2.04k How to Maintain Effective Working Relationships within Process Engineering Maintenance - 1 Credit

#### Electrical Pathway - Mandatory Units

- E2.01c Contribute to Planned Maintenance on Electrical Process Plant and Equipment - 2 Credits
- E2.01k How to Contribute to Planned Maintenance on Electrical Process Plant and Equipment - 2 Credits

#### Electrical Pathway - Optional Units - Group 1

*Learners must achieve 2 units from this Option Group.*

- C2.05c Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.05k How to Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.06c Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.06k How to Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.07c Move Loads within a Process Engineering Environment - 3 Credits
- C2.07k How to Move Loads within a Process Engineering Environment - 2 Credits
- E2.02c Contribute to the Preparation of Materials for the Maintenance of Electrical Process Plant and Equipment - 1 Credit
- E2.02k How to Contribute to the Preparation of Materials for the Maintenance of Electrical Process Plant and Equipment - 1 Credit
- E2.03c Contribute to the Preparation of Process Plant and Equipment in Support of Electrical Engineering Activities - 2 Credits
- E2.03k How to Contribute to the Preparation of Process Plant and Equipment in Support of Electrical Engineering Activities - 2 Credits

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## Electrical Pathway - Optional Units - Group 2

*Learners must achieve 4 units from this Option Group.*

- E2.04c Assemble Components of Electrical Process Plant and Equipment - 2 Credits
  - E2.04k How to Assemble Components of Electrical Process Plant and Equipment - 2 Credits
  - E2.05c Contribute to the Removal of Components from Electrical Process Plant and Equipment - 2 Credits
  - E2.05k How to Contribute to the Removal of Components from Electrical Process Plant and Equipment - 2 Credits
  - E2.06c Contribute to the Replacement of Components from Electrical Process Plant and Equipment - 2 Credits
  - E2.06k How to Contribute to the Replacement of Components from Electrical Process Plant and Equipment - 2 Credits
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## Instrument and Control Pathway - Mandatory Units

- I2.01c Contribute to Planned Maintenance on Instrument and Control Plant and Equipment - 2 Credits
- I2.01k How to Contribute to Planned Maintenance on Instrument and Control Plant and Equipment - 2 Credits

## Instrument and Control Pathway - Optional Units - Group 1

*Learners must achieve 2 units from this Option Group.*

- C2.05c Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.05k How to Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.06c Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.06k How to Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.07c Move Loads within a Process Engineering Environment - 3 Credits
- C2.07k How to Move Loads within a Process Engineering Environment - 2 Credits
- I2.02c Contribute to the Preparation of Materials for the Maintenance of Instrument and Control Process Plant and Equipment - 1 Credit
- I2.02k How to Contribute to the Preparation of Materials for the Maintenance of Instrument and Control Process Plant and Equipment - 1 Credit
- I2.03c Contribute to the Preparation of Process Plant and Equipment in Support of Instrument and Control Engineering Activities - 2 Credits
- I2.03k How to Contribute to the Preparation of Process Plant and Equipment in Support of Instrument and Control Engineering Activities - 2 Credits

## Instrument and Control Pathway - Optional Units - Group 2

*Learners must achieve 4 units from this Option Group.*

- I2.04c Assemble Components of Instrument and Control Process Plant and Equipment - 2 Credits
  - I2.04k How to Assemble Components of Instrument and Control Process Plant and Equipment - 2 Credits
  - I2.05c Contribute to the Removal of Components from Instrument and Control Process Plant and Equipment - 2 Credits
  - I2.05k How to Contribute to the Removal of Components from Instrument and Control Process Plant and Equipment - 2 Credits
  - I2.06c Contribute to the Replacement of Components in Instrument and Control Process Plant and Equipment - 2 Credits
  - I2.06k How to Contribute to the Replacement of Components in Instrument and Control Process Plant and Equipment - 2 Credits
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## Mechanical Pathway - Mandatory Units

- M2.01c Contribute to Planned Maintenance on Mechanical Process Plant and Equipment - 2 Credits
- M2.01k How to Contribute to Planned Maintenance on Mechanical Process Plant and Equipment - 2 Credits

## Mechanical - Optional Units - Group 1

*Learners must achieve 2 units from this Option Group.*

- C2.05c Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.05k How to Prepare Work Areas for the Maintenance of Process Plant and Equipment - 4 Credits
- C2.06c Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.06k How to Prepare Loads for Moving within a Process Engineering Environment - 2 Credits
- C2.07c Move Loads within a Process Engineering Environment - 3 Credits
- C2.07k How to Move Loads within a Process Engineering Environment - 2 Credits
- M2.02c Contribute to the Preparation of Materials for the Maintenance of Mechanical Process Plant and Equipment - 1 Credit
- M2.02k How to Contribute to the Preparation of Materials for the Maintenance of Mechanical Process Plant and Equipment - 1 Credit
- M2.03c Contribute to the Preparation of Process Plant and Equipment in Support of Mechanical Engineering Activities - 2 Credits
- M2.03k How to Contribute to the Preparation of Process Plant and Equipment in Support of Mechanical Engineering Activities - 2 Credits

## Mechanical Pathway - Optional Units - Group 2

*Learners must achieve 4 units from this Option Group.*

- M2.04c Assemble Components of Mechanical Process Plant and Equipment - 2 Credits
  - M2.04k How to Assemble Components of Mechanical Process Plant and Equipment - 2 Credits
  - M2.05c Contribute to the Removal of Components from Mechanical Process Plant and Equipment - 2 Credits
  - M2.05k How to Contribute to the Removal of Components from Mechanical Process Plant and Equipment - 2 Credits
  - M2.06c Contribute to the Replacement of Components in Mechanical Process Plant and Equipment - 2 Credits
  - M2.06k How to Contribute to the Replacement of Components in Mechanical Process Plant and Equipment - 2 Credits
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NVQ Diploma in Process Engineering Maintenance (QCF)      Level 3      65 Credits

501/0211/4

Last Registration Date      31<sup>st</sup> May 2015

Last Certification Date      31<sup>st</sup> May 2018

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This qualification contains the following Pathways: Electrical, Instrument and Control, Mechanical

For each Pathway: 24 Units totalling a minimum of 65 Credits are required.

For each Pathway learners must complete all common Mandatory Units, 6 Pathway-specific Mandatory Units, 4 Units from Option Group 1 and 4 Units from Option Group 2. Knowledge and competence units must be taken in combination i.e. if unit C3.06k is chosen, unit C3.06c must also be completed; and vice-versa.

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### Mandatory Units

- C2.04c      Maintain Effective Working Relationships within Process Engineering Maintenance - 1 Credit
  - C2.04k      How to Maintain Effective Working Relationships within Process Engineering Maintenance - 1 Credit
  - C3.01c      Carry Out Handover of Process Engineering Plant and Equipment - 2 Credits
  - C3.01k      How to Carry Out Handover of Process Engineering Plant and Equipment - 3 Credits
  - C3.02c      Reinstate the Work Area after Completing the Maintenance of Process Engineering Plant and Equipment - 2 Credits
  - C3.02k      How to Reinstate the Work Area after Completing the Maintenance of Process Engineering Plant and Equipment - 3 Credits
  - C3.03c      Minimise Risks to Life, Property and the Environment within Process Engineering Environments - 4 Credits
  - C3.03k      How to Minimise Risks to Life, Property and the Environment within Process Engineering Environments - 3 Credits
  - C3.04c      Work Safely, Minimise Risk and Comply with Emergency Procedures within Process Engineering Environments - 3 Credits
  - C3.04k      How to Work Safely, Minimise Risk and Comply with Emergency Procedures within Process Engineering Environments - 3 Credits
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### Electrical Pathway - Mandatory Units

- E3.01c      Carry Out Planned Maintenance on Electrical Plant and Equipment - 4 Credits
- E3.01k      How to Carry Out Planned Maintenance on Electrical Plant and Equipment - 4 Credits
- E3.02c      Deal with Variations and Defects in Electrical Plant and Equipment - 3 Credits
- E3.02k      How to Deal with Variations and Defects in Electrical Plant and Equipment - 3 Credits
- E3.03c      Diagnose and Determine the Causes of Faults in Electrical Plant and Equipment - 4 Credits
- E3.03k      How to Diagnose and Determine the Causes of Faults in Electrical Plant and Equipment - 4 Credits

### Electrical Pathway - Optional Units - Group 1

*Learners must achieve 4 units from this Option Group.*

- C3.06c      Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 3 Credits
  - C3.06k      How to Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 4 Credits
  - E3.04c      Prepare Equipment in Support of Electrical Engineering Activities - 2 Credits
  - E3.04k      How to Prepare Equipment in Support of Electrical Engineering Activities - 2 Credits
  - E3.05c      Prepare Materials for the Maintenance of Electrical Plant and Equipment - 2 Credits
  - E3.05k      How to Prepare Materials for the Maintenance of Electrical Plant and Equipment - 2 Credits
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- E3.06c Adjust Electrical Plant and Equipment to Meet Operational Requirements - 3 Credits
  - E3.06k How to Adjust Electrical Plant and Equipment to Meet Operational Requirements - 3 Credits
  - E3.07c Carry Out the Removal of Components from Electrical Plant and Equipment - 3 Credits
  - E3.07k How to Carry out the Removal of Components from Electrical Plant and Equipment - 3 Credits
  - E3.08c Carry Out the Replacement of Components from Electrical Plant and Equipment - 3 Credits
  - E3.08k How to Carry Out the Replacement of Components from Electrical Plant and Equipment - 3 Credits
  - E3.09c Determine the Feasibility of Repair of Components from Electrical Plant and Equipment - 3 Credits
  - E3.09k How to Determine the Feasibility of Repair of Components from Electrical Plant and Equipment - 3 Credits

#### Electrical Pathway - Optional Units - Group 2

*Learners must achieve 4 units from this Option Group.*

- E3.10c Interpret Detailed Electrical Information from Technical Sources - 2 Credits
- E3.10k How to Interpret Detailed Electrical Information from Technical Sources - 2 Credits
- E3.11c Read and Extract Information from Electrical Engineering Drawings and Specifications - 3 Credits
- E3.11k How to Read and Extract Information from Electrical Engineering Drawings and Specifications - 3 Credits
- E3.12c Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Electrical Plant and Equipment - 4 Credits
- E3.12k How to Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Electrical Plant and Equipment - 2 Credits
- E3.13c Establish that an Electrical Engineering Maintenance Process has been Completed to Specification - 3 Credits
- E3.13k How to Establish that an Electrical Engineering Maintenance Process has been Completed to Specification - 3 Credits
- E3.14c Test the Performance and Condition of Electrical Plant and Equipment - 3 Credits
- E3.14k How to Test the Performance and Condition of Electrical Plant and Equipment - 3 Credits
- E3.15c Monitor the Performance and Condition of Electrical Plant and Equipment - 3 Credits
- E3.15k How to Monitor the Performance and Condition of Electrical Plant and Equipment - 4 Credits
- E3.16c Assess the Performance and Condition of Electrical Plant and Equipment - 4 Credits
- E3.16k How to Assess the Performance and Condition of Electrical Plant and Equipment - 4 Credits
- E3.17c Inspect Electrical Plant and Equipment - 3 Credits
- E3.17k How to Inspect Electrical Plant and Equipment - 3 Credits

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#### Instrument and Control Pathway - Mandatory Units

- I3.01c Carry Out Planned Maintenance on Instrument and Control Systems - 4 Credits
- I3.01k How to Carry Out Planned Maintenance on Instrument and Control Systems - 4 Credits
- I3.02c Deal with Variations and Defects in Instrument and Control Systems - 3 Credits
- I3.02k How to Deal with Variations and Defects in Instrument and Control Systems - 3 Credits
- I3.03c Diagnose and Determine the Causes of Faults in Instrument and Control Systems - 4 Credits
- I3.03k How to Diagnose and Determine the Causes of Faults in Instrument and Control Systems - 4 Credits

#### Instrument and Control Pathway - Optional Units - Group 1

*Learners must achieve 4 units from this Option Group.*

- C3.06c Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 3 Credits
- C3.06k How to Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 4 Credits

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- I3.04c Prepare Equipment Required for Maintaining Instrument and Control Systems - 2 Credits
  - I3.04k How to Prepare Equipment Required for Maintaining Instrument and Control Systems - 2 Credits
  - I3.05c Prepare Materials Required for Maintaining Instrument and Control Systems - 2 Credits
  - I3.05k How to Prepare Materials Required for Maintaining Instrument and Control Systems - 2 Credits
  - I3.06c Adjust Instrument and Control Systems to Meet Operational Requirements - 3 Credits
  - I3.06k How to Adjust Instrument and Control Systems to Meet Operational Requirements - 3 Credits
  - I3.07c Carry Out the Removal of Components from Instrument and Control Systems - 3 Credits
  - I3.07k How to Carry Out the Removal of Components from Instrument and Control Systems - 3 Credits
  - I3.08c Carry Out the Replacement of Components in Instrument and Control Systems - 3 Credits
  - I3.08k How to Carry Out the Replacement of Components in Instrument and Control Systems - 3 Credits
  - I3.09c Determine the Feasibility of Repair of Components from Instrument and Control Systems - 3 Credits
  - I3.09k How to Determine the Feasibility of Repair of Components from Instrument and Control Systems - 3 Credits

### **Instrument and Control Pathway - Optional Units - Group 2**

*Learners must achieve 4 units from this Option Group.*

- I3.10c Interpret Detailed Instrument and Control Information from Technical Sources - 2 Credits
- I3.10k How to Interpret Detailed Instrument and Control Information from Technical Sources - 2 Credits
- I3.11c Read and Extract Information from Instrument and Control Engineering Drawings and Specifications - 3 Credits
- I3.11k How to Read and Extract Information from Instrument and Control Engineering Drawings and Specifications - 3 Credits
- I3.12c Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Instrument and Control Systems - 4 Credits
- I3.12k How to Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Instrument and Control Systems - 2 Credits
- I3.13c Establish that an Instrument and Control System Maintenance Process has been Completed to Specification - 3 Credits
- I3.13k How to Establish that an Instrument and Control System Maintenance Process has been Completed to Specification - 3 Credits
- I3.14c Test the Performance and Condition of Instrument and Control Systems - 3 Credits
- I3.14k How to Test the Performance and Condition of Instrument and Control Systems - 3 Credits
- I3.15c Monitor the Performance and Condition of Instrument and Control Systems - 3 Credits
- I3.15k How to Monitor the Performance and Condition of Instrument and Control Systems - 4 Credits
- I3.16c Assess the Performance and Condition of Instrument and Control Systems - 4 Credits
- I3.16k How to Assess the Performance and Condition of Instrument and Control Systems - 4 Credits
- I3.17c Inspect Instrument and Control Systems - 3 Credits
- I3.17k How to Inspect Instrument and Control Systems - 3 Credits

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### **Mechanical Pathway - Mandatory Units**

- M3.01c Carry Out Planned Maintenance on Mechanical Plant and Equipment - 4 Credits
- M3.01k How to Carry Out Planned Maintenance on Mechanical Plant and Equipment - 4 Credits
- M3.02c Deal with Variations and Defects in Mechanical Plant and Equipment - 3 Credits
- M3.02k How to Deal with Variations and Defects in Mechanical Plant and Equipment - 3 Credits
- M3.03c Diagnose and Determine the Causes of Faults in Mechanical Plant and Equipment - 4 Credits
- M3.03k How to Diagnose and Determine the Causes of Faults in Mechanical Plant and Equipment - 4 Credits

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## Mechanical - Optional Units - Group 1

*Learners must achieve 4 units from this Option Group.*

- C3.06c Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 3 Credits
- C3.06k How to Prepare Work Areas for the Maintenance of Process Engineering Plant and Equipment - 4 Credits
- M3.04c Prepare Equipment in Support of Mechanical Engineering Activities - 2 Credits
- M3.04k How to Prepare Equipment in Support of Mechanical Engineering Activities - 2 Credits
- M3.05c Prepare Materials for the Maintenance of Mechanical Plant and Equipment - 2 Credits
- M3.05k How to Prepare Materials for the Maintenance of Mechanical Plant and Equipment - 2 Credits
- M3.06c Adjust Mechanical Plant and Equipment to Meet Operational Requirements - 3 Credits
- M3.06k How to Adjust Mechanical Plant and Equipment to Meet Operational Requirements - 3 Credits
- M3.07c Carry out the Removal of Components from Mechanical Plant and Equipment - 3 Credits
- M3.07k How to Carry out the Removal of Components from Mechanical Plant and Equipment - 3 Credits
- M3.08c Carry Out the Replacement of Components from Mechanical Plant and Equipment - 3 Credits
- M3.08k How to Carry Out the Replacement of Components from Mechanical Plant and Equipment - 3 Credits
- M3.09c Determine the Feasibility of Repair of Components from Mechanical Plant and Equipment - 3 Credits
- M3.09k How to Determine the Feasibility of Repair of Components from Mechanical Plant and Equipment - 3 Credits

## Mechanical Pathway - Optional Units - Group 2

*Learners must achieve 4 units from this Option Group.*

- M3.10c Interpret Detailed Mechanical Information from Technical Sources - 2 Credits
- M3.10k How to Interpret Detailed Mechanical Information from Technical Sources - 2 Credits
- M3.11c Read and Extract Information from Mechanical Engineering Drawings and Specifications - 3 Credits
- M3.11k How to Read and Extract Information from Mechanical Engineering Drawings and Specifications - 3 Credits
- M3.12c Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Mechanical Plant and Equipment - 4 Credits
- M3.12k How to Identify and Suggest Improvements to Working Practices and Procedures whilst Maintaining Mechanical Plant and Equipment - 2 Credits
- M3.13c Establish that a Mechanical Engineering Maintenance Process has been Completed to Specification - 3 Credits
- M3.13k How to Establish that a Mechanical Engineering Maintenance Process has been Completed to Specification - 3 Credits
- M3.14c Test the Performance and Condition of Mechanical Plant and Equipment - 3 Credits
- M3.14k How to Test the Performance and Condition of Mechanical Plant and Equipment - 3 Credits
- M3.15c Monitor the Performance and Condition of Mechanical Plant and Equipment - 3 Credits
- M3.15k How to Monitor the Performance and Condition of Mechanical Plant and Equipment - 4 Credits
- M3.16c Assess the Performance and Condition of Mechanical Plant and Equipment - 4 Credits
- M3.16k How to Assess the Performance and Condition of Mechanical Plant and Equipment - 4 Credits
- M3.17c Inspect Mechanical Plant and Equipment - 3 Credits
- M3.17k How to Inspect Mechanical Plant and Equipment - 3 Credits