FutureQuals
INSPIRING LEARNING AND SKILLS

Level 3 NVQ Diploma In

BUSINESS IMPROVEMENT TECHNIQUES

Evidence Logbook

Qualification recognition number: 601/3761/7
Qualification Reference: L3NVQDBIT

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Assessment Principles

1. Assessment Principles

1.1 Assessment decisions for competence based learning outcomes (e.g. those beginning with 'to be able to') must be made in a real work environment by an occupationally competent assessor. Any knowledge evidence integral to these learning outcomes may be generated outside of the work environment but the final assessment decision must be within the real work environment.

1.2 Assessment decisions for competence based learning outcomes must be made by an assessor qualified to make assessment decisions.

1.3 Competence based assessment must include direct observation as the main source of evidence.

1.4 Simulation may only be utilised as an assessment method for competence based learning outcomes if specified in the assessment requirements of the component.

1.5 Expert witnesses can be used for direct observation if they have occupational expertise for specialist areas or, if the observation is of a particularly sensitive nature. The use of expert witnesses should be determined and agreed by the assessor.

1.6 Assessment of knowledge based learning outcomes (e.g. those beginning with 'know' or 'understand') may take place in or outside of a real work environment.

1.7 Assessment decisions for knowledge based learning outcomes must be made by an occupationally knowledgeable assessor.

1.8 Assessment decisions for knowledge based learning outcomes must be made by an assessor qualified to make assessment decisions. Where assessment is electronic or undertaken according to a set grid, the assessment decisions are made by the person who has set the answers.

2. Internal Quality Assurance

2.1 Internal quality assurance is key to ensuring that the assessment of evidence for component is of a consistent and appropriate quality. Those carrying out internal quality assurance must be occupationally knowledgeable in the area they are assuring and be qualified to make quality assurance decisions.

3. Definitions

3.1 Occupationally competent:
This means that each assessor must be capable of carrying out the full requirements within the competency components they are assessing. Being occupationally competent means they are also occupationally knowledgeable. This occupational competence should be maintained annually through clearly demonstrable continued learning and professional development.

3.2 Occupationally knowledgeable:
This means that each assessor should possess relevant knowledge and understanding and be able to assess this in components designed to test knowledge and understanding. This occupational

knowledge should be maintained annually through clearly demonstrable continued learning and professional development.

3.3 Qualified to make assessment decisions:
This means that each assessor must hold a qualification suitable to support the making of appropriate and consistent assessment decisions. Awarding organisations will determine what qualifies those making assessment decisions according to the competency components under assessment. In any case of significant uncertainty, the Sector Skills Council will be consulted.

3.4 Qualified to make quality assurance decisions:
Awarding organisations will determine what qualifies an assessor undertaking internal quality assurance to make decisions about quality assurance.

3.5 Expert witness:
An expert witness must:

- have a working knowledge of the components on which their expertise is based
- be occupationally competent in their area of expertise
- have EITHER any qualification in assessment of workplace performance OR a professional work role which involves evaluating the everyday practice of staff

Evidence Requirements for the Level 3 NVQ Diploma in Business-Improvement Techniques - Quality Improvement

You must meet all the learning outcomes and assessment criteria identified in each component to achieve the full component. Evidence should be developed over a period of time using diverse assessment methods.

How Your Evidence is Checked

After your Assessor has assessed your work, another member of staff - the Internal Quality Assurer - will review it. An External Quality Assurer from Future (Awards and Qualifications) will visit your assessment centre.

Certificate Claims

Once you've built up your portfolio of evidence, your assessor will sign off your component declaration and present your portfolio to the Internal Quality Assurer. Once the portfolio has passed the internal quality assurance process, the centre can claim your certificate.

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Component 1: Leading Effective Teams

Component Reference Number: T/600/5306

Level: 3
Credit: 9
GL: 26

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1 Lead effective teams			
1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines			
1.2 Work in accordance with the roles and responsibilities identified for the team leader role			
1.3 Obtain the authority and support for the release of the necessary resources to carry out the team activities			
1.4 Consult with appropriate people in order to secure the release of the following resources: • people involved • work space/work area required • documentation and information required			
1.5 Set realistic and achievable goals and objectives for their team, in accordance with the targets set for themselves or for the work area/activity			

1.6 Prioritise the work activities to achieve the objectives, cost-effectively and efficiently			
1.7 Develop action plans which clearly identify activities and responsibilities required to meet the team targets: • for themselves • for the team			
1.8 Determine and agree individual roles and responsibilities, and coach/mentor their team, focusing on the objectives that have been set			
1.9 Monitor the performance of their team against the goals and objectives which have been set, and communicate this to the relevant people			
1.10 Communicate effectively with: • management • peers • subordinates			
1.11 Communication must include: • verbal • written • electronic methods			
1.12 Consult with subject specialists when required, to gain the necessary information to support the team goals and objectives			

1.13 Deal promptly and effectively with any problems within their control, and report those that cannot be resolved			
2 Know how to lead effective teams			
2.1 Describe the roles and responsibilities of themselves and others under the Health and Safety at Work Act			
2.2 Describe the business targets set for their area of responsibility, and how to set personal, individual and team targets to achieve them (action planning)			
2.3 Explain how to prioritise their own and their team's workload to ensure that targets are met			
2.4 Explain how to communicate effectively, listen, question, support and coach others to work towards the business targets			
2.5 Explain how to present information effectively to management, peers or team members, using different methods			
2.6 Explain how to conduct a team performance review and how to involve the team in brainstorming activities to identify opportunities, threats and solutions			
2.7 Describe the types of conflict and problem that might emerge between work activities			

2.8 Describe the organisational processes and procedures required to run their area of responsibility effectively (such as quality procedures, code of conduct, standard operations, problem resolution procedures)			
2.9 Describe the improvement tools and techniques being used in their area of responsibility (such as hourly count monitor, TAKT time, continuous flow process, flexible manpower systems, quality level, defects per million opportunities, workplace organisation)			
2.10 Describe the specialist help that they may require in their area of responsibility, and how this can be obtained			
2.11 Explain how to structure and lead a team event, and the presentation materials and work documentation required			
2.12 Explain how to train others in the processes and procedures relevant to them, and their area of responsibility			
2.13 Explain how to monitor and check that their team is working to identified quality and safety standards			

2.14 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve			

Learner declaration of authenticity:
I declare that the work presented for this component is entirely my own work.

Learner signature: Date:

Assessor sign off of completed component:
I confirm that the learner has met the requirements for all assessment criteria demonstrating knowledge and skills for this component.

Assessor name:

Signature: Date:

Component 2: Complying with Statutory Regulations and Organisational Safety Requirements

Component Reference Number: A/601/5013

Level: 2
Credit: 5
GL: 35

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1 Comply with statutory regulations and organisational safety requirements			
1.1 Comply with their duties and obligations as defined in the Health and Safety at Work Act			
1.2 Demonstrate their understanding of their duties and obligations to health and safety by: • applying in principle their duties and responsibilities as an individual under the Health and Safety at Work Act • identifying, within their organisation, appropriate sources of information and guidance on health and safety issues, such as: - eye protection and personal protective equipment (PPE) - COSHH regulations - Risk assessments • identifying the warning signs and labels of the main groups of hazardous or dangerous substances • complying with the appropriate statutory regulations at all times			

1.3 Present themselves in the workplace suitably prepared for the activities to be undertaken			
1.4 Follow organisational accident and emergency procedures			
1.5 Comply with emergency requirements, to include: • identifying the appropriate qualified first aiders and the location of first aid facilities • identifying the procedures to be followed in the event of injury to themselves or others • following organisational procedures in the event of fire and the evacuation of premises • identifying the procedures to be followed in the event of dangerous occurrences or hazardous malfunctions of equipment			
1.6 Recognise and control hazards in the workplace			
1.7 Identify the hazards and risks that are associated with the following: • their working environment • the equipment that they use • materials and substances (where appropriate) that they use • working practices that do not follow laid-down procedures			

1.8 Use correct manual lifting and carrying techniques			
1.9 Demonstrate one of the following methods of manual lifting and carrying: • lifting alone • with assistance of others • with mechanical assistance			
1.10 Apply safe working practices and procedures to include: • maintaining a tidy workplace, with exits and gangways free from obstruction • using equipment safely and only for the purpose intended • observing organisational safety rules, signs and hazard warnings • taking measures to protect others from any harm resulting from the work that they are carrying out			
2 Know how to comply with statutory regulations and organisational safety requirements			
2.1 Describe the roles and responsibilities of themselves and others under the Health and Safety at Work Act, and other current legislation (such as The Management of Health and Safety at Work Regulations, Workplace Health and Safety and Welfare Regulations, Personal Protective Equipment at Work Regulations, Manual Handling Operations			

Regulations, Provision and Use of Work Equipment Regulations, Display Screen at Work Regulations, Reporting of Injuries, Diseases and Dangerous Occurrences Regulations)			
2.2 Describe the specific regulations and safe working practices and procedures that apply to their work activities			
2.3 Describe the warning signs for the seven main groups of hazardous substances defined by Classification, Packaging and Labelling of Dangerous Substances Regulations			
2.4 Explain how to locate relevant health and safety information for their tasks, and the sources of expert assistance when help is needed			
2.5 Explain what constitutes a hazard in the workplace (such as moving parts of machinery, electricity, slippery and uneven surfaces, poorly placed equipment, dust and fumes, handling and transporting, contaminants and irritants, material ejection, fire, working at height, environment, pressure/stored energy systems, volatile, flammable or toxic materials, unshielded processes, working in confined spaces)			

2.6 Describe their responsibilities for identifying and dealing with hazards and reducing risks in the workplace			
2.7 Describe the risks associated with their working environment (such as the tools, materials and equipment that they use, spillages of oil, chemicals and other substances, not reporting accidental breakages of tools or equipment and not following laid-down working practices and procedures)			
2.8 Describe the risks associated with their working environment (such as the tools, materials and equipment that they use, spillages of oil, chemicals and other substances, not reporting accidental breakages of tools or equipment and not following laid-down working practices and procedures)			
2.9 Describe the first aid facilities that exist within their work area and within the organisation in general; the procedures to be followed in the case of accidents involving injury			
2.10 Explain what constitute dangerous occurrences and hazardous malfunctions, and why these must be reported even if no-one is injured			

2.11 Describe the procedures for sounding the emergency alarms, evacuation procedures and escape routes to be used, and the need to report their presence at the appropriate assembly point			
2.12 Describe the procedures for sounding the emergency alarms, evacuation procedures and escape routes to be used, and the need to report their presence at the appropriate assembly point			
2.13 Describe the protective clothing and equipment that is available for their areas of activity			
2.14 Explain how to safely lift and carry loads, and the manual and mechanical aids available			
2.15 Explain how to prepare and maintain safe working areas; the standards and procedures to ensure good housekeeping			
2.16 Describe the importance of safe storage of tools, equipment, materials and products			
2.17 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve			

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Signature: Date:

Component 3: Applying Six Sigma Methodology to a Project

Component Reference Number: M/600/5305

Level: 3
Credit: 18
GL: 62

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1. Apply Six Sigma methodology to a project			
1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines			
1.2 Apply the structured Six Sigma methodology and approach to the selected project			
1.3 Identify and participate in Six Sigma projects which cover two the following: • manufacturing • quality level • administration			
1.4 Utilise the five phases of Six Sigma within the project: • define • measure • analyse • improve • control			
1.5 Identify the Six Sigma organisational infrastructure, roles and responsibilities and business-specific metrics that would apply			

1.6 Produce a diagram (family tree) of the Six Sigma organisational infrastructure and the roles of: • Champion • Mentor • Yellow Belt • Green Belt • Black Belt • Master Black Belt			
1.7 Contribute to producing a metric chart for the Six Sigma projects undertaken, to include • financial • quality • process			
1.8 Identify areas where the Six Sigma tools, techniques and activities can be applied, and demonstrate the need to measure those factors that are critical to quality characteristic (CTQC) for the customer, business and process			
1.9 Identify the critical to quality characteristic (CTQC) of the projects, to include: • cost • quality • delivery			
1.10 Contribute to the identification of the cost of poor quality, by identifying the defects per million opportunities (DPMO)			

1.11 Relate defects per million opportunities to the sigma score, and identify the gap to Six Sigma performance			
2 Know how to apply Six Sigma methodology to a project			
2.1 Describe the Six Sigma methodology, and how it is applied to a project			
2.2 Describe the Six Sigma infrastructure and philosophy			
2.3 Describe the benefits that will arise from a Six Sigma project			
2.4 Describe the 'parts per million opportunities' goal of Six Sigma			
2.5 Describe the calculation of defects per million opportunities (DPMO)			
2.6 Describe the five phases of Six Sigma that are applied to a project			
2.7 Explain how to define a critical to quality characteristic (CTQC)			
2.8 Explain how non-value added activity can serve as a roadblock for achieving zero defect			
2.9 Explain how to define an 'opportunity for defect'			
2.10 Describe the roles and responsibilities of the key players in the Six Sigma process (Champion, Mentor, Master Black Belt, Black Belt, Green Belt and Yellow Belt)			

2.11 Describe the relationship between key process input variables (KPIV) and key process output variables (KPOV) (using the equation Y=(f)x)			
2.12 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve			

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Signature: Date:

Component 4: Carrying out Six Sigma Process Mapping

Component Reference Number: F/600/5308

Level: 3
Credit: 18
GL: 58

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1. Carry out Six Sigma process mapping			
1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines			
1.2 Select a suitable process on which to carry out the process mapping activity			
1.3 Identify the key stages that form the overall process under investigation			
1.4 Collect the data necessary to construct the Six Sigma process map			
1.5 Collect the data necessary to construct the Six Sigma process map			
1.6 Produce a process map, which identifies: • the key process input variables • the key process output variables			
1.7 Classify both the key process input variables and the key process output variables as one or more of the following: • controllable • critical			

• noise • standard operating procedure			
1.8 Classify both the key process input variables and the key process output variables as one or more of the following: • controllable • critical • noise • standard operating procedure			
1.9 Identify improvements to the process as a result of the information gathered in the Six Sigma mapping activity			
1.10 Identify and add to the process map the specifications of both the: • key process input variables • key process output variables			
2 Know how to carry out Six Sigma process mapping			
2.1 Describe the health and safety requirements of the area in which they are carrying out the process mapping activity			
2.2 Describe the benefits of carrying out Six Sigma process mapping			
2.3 Describe the benefits of carrying out Six Sigma process mapping			
2.4 Explain how the Six Sigma process map integrates within a Six Sigma project			

2.5 Explain what is meant by key process input variables (KPIVs) and key process output variables (KPOVs)			
2.6 Describe the data collection point for the key process input variables and key process output variables (such as gauges, forms and samples)			
2.7 Explain what the main types of key process input variables and key process output variables are in terms of being controllable, critical, noise, or standard operating procedures			
2.8 Explain who should create a Six Sigma process map			
2.9 Explain who should create a Six Sigma process map			
2.10 Describe the roles and responsibilities of individuals within a process mapping team			
2.11 Describe the roles and responsibilities of individuals within a process mapping team			

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Assessor name:

Signature: Date:

Component 5: Applying Basic Statistical Analysis

Component Reference Number: F/600/5311

Level: 3
Credit: 14
GL: 36

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1. Apply basic statistical analysis			
1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines			
1.2 Consult with appropriate people and gather the relevant data for statistical analysis			
1.3 Produce data gathering forms or charts to gather information to enable statistical and graphical analysis to take place			
1.4 Record the collected data, utilising three of the following methods: • bar charts • histograms • Pareto diagrams • stem and leaf diagrams • box plots • time series charts			
1.5 Utilise statistical and graphical analysis on a Six Sigma project			

1.6 Produce descriptive statistics of data, to include all of the following: • mean • median • mode • standard deviation • range and variance			
1.7 Produce a normal distribution to assess a population from the representative sample			
1.8 Interpret the statistical data collected, in order to validate the pre-determined courses of action			
1.9 Produce an action plan as a result of the statistical and graphical analysis undertaken			
2 Know how to apply basic statistical analysis			
2.1 Describe the health and safety requirements of the area in which they are collecting data			
2.2 Describe the meaning of 'variation', how this can be detected with statistics, and how this variation can affect a process			
2.3 Describe the number of data points needed to draw a statistically valid conclusion			
2.4 Explain why we need to use basic statistics			
2.5 Describe the meaning of the terms 'population' and 'sample' when applied to basic statistics			

2.6 Describe distribution curves and the properties of a normal curve			
2.7 Explain how to create and use charts and diagrams (such as histograms, box plots, time series charts, Pareto diagrams, stem and leaf diagrams)			
2.8 Explain how to create and use charts and diagrams (such as histograms, box plots, time series charts, Pareto diagrams, stem and leaf diagrams)			
2.9 Describe the difference between descriptive and inferential statistics			
2.10 Describe the extent of their own authority within the project, and to whom they should report in the event of problems that they cannot resolve			

Learner declaration of authenticity:
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Assessor name:

Signature: Date:

Component 6: Applying Failure Modes and Effects Analysis _FMEA_

Component Reference Number: J/600/5312

Level: 3
Credit: 13
GL: 42

	Assessment Method	Evidence Ref. Page number, Method	Assessor Decision Sign and Date
You must be able to:			
1. Apply failure modes and effects analysis (FMEA)			
1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines			
1.2 Determine the key features of failure modes and effects analysis required for the activity under investigation			
1.3 Carry out a failure modes and effects analysis on two of the following: • concept • product • design • process • system • machine			
1.4 Identify, for the activities analysed: • the potential failure modes • the potential effects from failure modes • the potential causes of failure modes			

1.5 Co-ordinate and produce a failure modes and effects analysis			
1.6 Record the information gathered in an appropriate format			
1.7 Identify and score all of the following: • the likely occurrence of a potential failure modes • the severity of the potential failure modes • the likelihood of detection of the potential failure modes			
1.8 Make valid judgements about the activity using failure modes and effects analysis principles			
1.9 Calculate risk priority numbers (RPNs), identify high RPNs, and develop actions to improve them			
1.10Establish rating tables for all of the following: • occurrence • severity • detection			
1.11Reassess a failure modes and effects analysis once actions have been completed, and re-score severity, occurrence and detection			
2 Know how to apply failure modes and effects analysis (FMEA)			
2.1 Describe the health and safety requirements of the area in which they are conducting the failure modes and effects analysis			

2.2 Describe the main features and benefits of carrying out a failure modes and effects analysis			
2.3 Explain who should be part of a team that constructs and updates a failure modes and effects analysis			
2.4 Explain who should be part of a team that constructs and updates a failure modes and effects analysis			
2.5 Describe the meaning of failure mode, failure effect and failure cause			
2.6 Describe the meaning of failure mode, failure effect and failure cause			
2.7 Explain how to calculate a risk priority number (RPN)			
2.8 Explain how to use the risk priority numbers			
2.9 Explain how to apply a structured approach to risk reduction			
2.10 Explain when to start a failure modes and effects analysis			
2.11 Explain when to update a failure modes and effects analysis			
2.12 Explain when to update a failure modes and effects analysis			
2.13 Describe the extent of their own authority within the project, and to whom they should report in the event of problems that they cannot resolve			

Learner declaration of authenticity:
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Learner signature: Date:

Assessor sign off of completed component:
I confirm that the learner has met the requirements for all assessment criteria demonstrating knowledge and skills for this component.

Assessor name:

Signature: Date:

Level 3 NVQ Diploma in Business-Improvement Techniques - Quality Improvement
Summary of Achievement – Mandatory Components

Learner Name		FutureQuals Learner Number	
Centre Name		Centre Number	

Component Number	Component Title	Credits	Date Verified	Learner Signature	Assessor Signature	IQA Signature	EQA Signature
1	Leading Effective Teams	9					
2	Complying with Statutory Regulations and Organisational Safety Requirements	5					
3	Applying Six Sigma Methodology to a Project	18					
4	Carrying out Six Sigma Process Mapping	18					
5	Applying Basic Statistical Analysis	14					
6	Applying Failure Modes and Effects Analysis _FMEA_	13					

Competence has been demonstrated in all the components recorded above using the required assessment procedures and the specified conditions/contexts. The evidence meets the requirements for validity, authenticity, currency, reliability and sufficiency.

Internal Quality Assurer Signature	Date

Level 3 NVQ Diploma in Business-Improvement Techniques - Quality Improvement
Summary of Achievement – Optional Components

Must not be used alone – this sheet must be attached to a Mandatory Component Summary of Achievement

Learner Name		FutureQuals Learner Number	
Centre Name		Centre Number	

Component Number	Component Title	Credits	Date Verified	Learner Signature	Assessor Signature	IQA Signature	EQA Signature

Competence has been demonstrated in all the components recorded above using the required assessment procedures and the specified conditions/contexts. The evidence meets the requirements for validity, authenticity, currency, reliability and sufficiency.

Internal Quality Assurer Signature	Date

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FutureQuals™
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