

JC Training & Consultancy

LEAN Six Sigma Green Belt



APPRENTICESHIPS

BUSINESS
CUSTOMER SERVICE
LEADERSHIP & MANAGEMENT

CHOOSE YOUR APPRENTICESHIP PATHWAY

EDUCATION **EARLY YEARS**
BUSINESS IMPROVEMENT
RETAIL
SALES & MARKETING

The image features a woman in a pink long-sleeved shirt shouting into a megaphone. The word "APPRENTICESHIPS" is written in a large, bold, black, curved font above her. To the left of the woman, there are several text elements: "BUSINESS", "CUSTOMER SERVICE", and "LEADERSHIP & MANAGEMENT" are arranged in a curved path. Below these, the text "CHOOSE YOUR APPRENTICESHIP PATHWAY" is centered. Further down, "EDUCATION" and "EARLY YEARS" are on the left, while "BUSINESS IMPROVEMENT", "RETAIL", and "SALES & MARKETING" are on the right. There are also two decorative grids of small black dots, one in the top left and one in the bottom right.

Unit 1 - Principles & Methods of DMAIC	3
Unit 2 - Principles & Methods	5
Unit 3 - Project Management	Error! Bookmark not defined.
Unit 4 - Project Selection & Scope	9
Unit 5 - Change Management	11
Unit 6 - Problem Definition & Process Mapping	13
Unit 7 - Process Capability & Performance	15
Unit 8 - Experimentation & Identification	17
Unit 9 - Data Analysis & Basic Statistical Measures	19

Unit 1 - Principles & Methods of DMAIC

Curriculum Intent (Subject Content)

The purpose and scope of this area is to deepen your understanding of DMAIC and each of its steps, and then link these steps to the appropriate tools that should be covered during each stage. This module will also provide an overview of their purpose and teach you how best to apply these tools in support of your improvement project. It will cover exactly what DMAIC is, and the principles of Six Sigma improvement that support it.

The tools that will be covered are:

- Project Charter,
- SIPOC,
- Kano Model,
- House of Quality,
- Process Walk,
- A3 Thinking Methodology,
- Critical to Quality tree diagrams,
- Value Stream Mapping,
- Swimlane Map,
- Stakeholder Analysis,
- Voice of Customer translation matrix,
- Fishbone diagram,
- Value Added Flow Analysis,
- 5 Whys,
- Root Cause Hypothesis,
- Pareto Charts,
- PDCA/PDSA,
- Control Chart,

The aim of this module is to enable you to learn how to best apply DMAIC and its tools to your own improvement project, enabling you to gain a deeper understanding of the problems that your project faces and develop strategies for how you will go about fixing them.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn about the Principles & Methods supporting Improvement through the following tools:

- Resource material to learn about each of the phases of DMAIC, as well as the various tools that are applied to each phase, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment to which you must apply the appropriate improvement related tools and methods to meet performance expectations and manage change.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered?)

Once you have developed the knowledge and understanding of the Principles & Methods of DMAIC, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Daily improvement work, using the tools and phases provided during this module to scrutinise the current state of a process and your own improvement project.
- Apply each of the tools listed within this module to effectively support the overall goal of your project,
- Understand the full lifecycle of a DMAIC improvement project and how toll-gate reviews should be conducted between each phase in order to measure progress and the viability of the project continuing.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding the Principles & Methods of improvement and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 2 - Principles & Methods

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of the Principles & Methods supporting the field of Improvement, including insight into DFSS and the differences it has with DMAIC, as well as the scenarios in which these two models should be applied. This area will also cover 8D, a problem-solving and improvement methodology, practical problem solving and the business value of LEAN and Six Sigma Improvement methods.

The aim of this module is to enable you to understand the different types of improvement methodology, and how they differ from DMAIC in purpose, scope and process; DMAIC, DFSS and 8D are applicable to different types of projects, and so it is important to know their differences. This module also aims to link these tools to the validation and acceptance of the project by organisational management through the business value of your project.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn about the Principles & Methods supporting Improvement through the following tools:

- Resource material to learn about the DFSS and 8D methodology, as well as their differences when compared with DMAIC, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment to which you must apply the appropriate improvement related tools and methods in order to meet performance expectations and manage change.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Principles & Methods, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Design a process from scratch using the DFSS methodology and apply the 8D problem solving methodology to help you to arrive at solutions within your project team.

- Understand where and when it is appropriate to apply the DMAIC, DFSS and 8D methodologies.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding the Principles & Methods of improvement and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 3 - Project Management

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Project Management, using suitable approaches and models relevant to the situation whilst gaining understanding of how a project's Management can directly impact the success of that project, both adversely and positively.

The aim of this module is to enable you to learn how to Manage a project and the changes that are occurring within it. It also aims to enable you to define, sequence, plan and schedule activities with phases and milestones, and then estimate project effort and duration.

The topics that will be covered within this module are:

- Risk analysis and management,
- Work breakdown structure,
- Pilot studies,
- Process Management and measures,
- Project Charters. What is it, why is it beneficial and how do you create one?

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to Manage a Project through the following tools:

- Resource material to learn about the different facets of Project Management, and the models and tools we can use to improve it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment where you must consider the selection and scope of your project to ensure that your work remains focused and task appropriate.
- Analysis of current practice in relation to the models you have gained understanding of during this stage. Are you conducting toll-gate reviews, pilot studies, risk analysis and management and process management for projects?
- Completion of a Project Charter. Why is each part of this tool important? What is the purpose of this tool? Who needs to be involved with the Project Charter and give their authority for the project as a whole?

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Project Management you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Selecting appropriate projects that will have a positive impact on your organisation,
- Justifying the existence of these projects to organisational Management through a number of the tools and models you have gained understanding of,
- Daily Project Management duties and responsibilities, considering factors such as Risk Management, Process Management and regular reviews.
- Conduct toll-gate reviews after each phase of your project to determine whether each phase has been successfully completed, and whether the project as a whole will continue into the next phase,
- Manage risk within your project to ensure that your work is a safe investment for the organisation, whilst still taking advantage of the opportunities that present themselves to your team.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Project Management and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 4 - Project Selection & Scope

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Project Selection & Project Scope, using suitable approaches and models relevant to the situation whilst gaining understanding of how a project's Selection and Scope can directly impact the success of the resulting project. It will also highlight the consequences of poorly selecting a project, and what can happen if you fail to adhere to scope.

The topics that will be covered within this module are:

- $Y=f(x)$ equation (outputs are the result of inputs),
- Business Scorecard Cascade.

The aim of this module is to enable you to learn how to effectively Select and Scope a project. This will allow you to keep your projects focused, on-track and ensure that their resulting changes are going to be effective within your organisation or area of influence; if your project is poorly selected or poorly scoped, the changes you make are unlikely to have a significant positive impact upon the original problem you were looking to solve.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to Manage, Select and Scope a Project through the following tools:

- Resource material to learn about the different facets of Project Selection and Scope, and the models and tools we can use to improve it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment where you must consider the selection and scope of your project to ensure that your work remains focused and task appropriate.
- Analysis of current practice in relation to the models you have gained understanding of during this stage. Are you following a proper process when selecting and scoping projects, or are you moving into action too quickly?
- Completion of a Business Scorecard Cascade relevant to your organisation or area of influence, as well as a $Y=F(X)$ inputs chart to ensure your project is focused around changing the right things to solve your problem.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Project Selection and Scope, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Selecting appropriate projects that will have a positive impact on your organisation,
- Justifying the existence of these projects to organisational Management through a number of the tools and models you have gained understanding of,
- Scoping projects to ensure that your work remains focused,
- Manage risk within your project to ensure that your work is a safe investment for the organisation, whilst still taking advantage of the opportunities that present themselves to your team.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Project Selection and Scope and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 5 - Change Management

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Change Management, including an in-depth analysis of the key methodologies of change. These are:

- Lewin's Change Management,
- McKinsey 7s,
- Nudge Theory,
- Kotter's 8 Step Change Theory.

This module will also cover the principles of stakeholder management, including identification, analysis and the change curve when considering employees of the organisation.

This area will also look in-depth at several tools:

- RACI,
- VOC,
- SIPOC,
- Critical to Quality Trees,
- House of Quality.

The aim of this module is to enable you to gain an understanding of business changes, resistance to change and how to manage change. It aims to teach you how to gather, analyse and interpret data relating to change that will support the project charter. You will also learn how to create sponsorship contracts and compelling narratives in favour of change, and how to assess the impact of your change.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to manage change through the following tools:

- Resource material to learn about the different facets of Change Management, and the models and tools we can use to support it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment to which you must balance and manage the satisfaction of stakeholders and your employees.
- Analysis of current Change Management practice. Are stakeholders being properly satisfied, or are they routinely acting as a barrier to improvement?

- Completion of the various tools that you will learn about during this module in relation to your own organisation or area of influence.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Change Management, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Manage stakeholders on a day-to-day basis by ensuring they remain satisfied. Are they receiving enough information? Is the project on track?
- Help employees progress quickly through the change curve in order to minimise the negative impacts upon your organisation or area of influence,
- Take advantage of an array of tools related to change management in order to analyse and improve your work and the processes you are focused on.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Change Management and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 6 - Problem Definition & Process Mapping

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Problem Definition & Process Mapping.

There are a number of different tools and models that you will consider throughout this module:

- Cost of Poor Quality,
- Process Walk (spaghetti map),
- Problem Analysis Models (e.g., Is/Is Not),
- Swim Lane,
- Value Stream Map,
- Performance Metrics,
- Takt Time,
- Overall Equipment Effectiveness,
- Kanban.

The aim of this module is to enable you to gain an understanding of how to support the development of problem and opportunity statements, and to enable you to map processes in order to measure and analyse flow and value. This module also aims to enable you to identify interfaces, functional responsibilities and ownership. It also considers the future state of your organisation or area of influence, using insight to identify potential opportunities and map your future state.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to manage change through the following tools:

- Resource material to learn about the different facets of Problem Definition & Process Mapping, and the models and tools we can use to support it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at situations within a working environment in which you need to clearly define problems within your processes and map out those processes from start to end.
- Completion of the various tools that you will learn about during this module in relation to your own organisation or area of influence.
- Using a Process Walk to deeply analyse the entirety of one of your own organisation/areas of influence's processes, and then considering what the problems may be with that process.

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Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Problem Definition & Process Mapping, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Daily improvement project work,
- Ensuring that an improvement project remains focused on specific problems by clearly defining them,
- You will be able to complete all the tools listed within this module including a SIPOC, Process Walk, VSM, Swim Lane Analysis and Cost of Poor-Quality trees.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Problem Definition & Process Mapping and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 7 - Process Capability & Performance

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Process Capability & Performance, primarily through the use of a Process Capability Analysis on continuous data with a normal distribution.

We will also consider the following tools:

- 5S
- Box Plots

The aim of this module is to enable you to gain an understanding of how to analyse and improve Process Capability & Performance, enabling you to identify the RPN and interpret your results.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to identify and manage Process Capability & Performance through the following methods:

- Resource material to learn about the different facets of Process Capability & Performance, and the models and tools we can use to improve it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at the current state of your process and analyse both its capability and its performance. If you are unable to do so, your project is unlikely to be a success as the issue is likely to recur.
- Completion of the various tools that you will learn about during this module in relation to your own organisation or area of influence, allowing you to analyse the capability and performance of processes.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Process Capability & Performance, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Analyse the Capability of their chosen process, enabling them to draw conclusions about the reliability at which the process performs to expected levels,
- Statistically analyse data sets to consider performance and capability in support of qualitative conclusions,
- Complete the tools associated with this module and apply them to their own organisation or area of influence,
- Conduct a Failure Mode Effects Analysis to determine the performance of their chosen process.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Process Capability & Performance and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 8 - Experimentation & Identification

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Experimentation & Identification within an Improvement Project and how to best make use of your Project Closure to reflect upon the improvements you have made. You will gain understanding of the difference between active and passive analytics.

This module will also provide you with in-depth understanding of the following tools:

- Design of Experiments,
- Experiment Plan,
- Selection and Prioritisation Matrix,
- Control (Monitoring) Plans,

The aim of this module is to enable you to gain an understanding of how to properly plan and conduct experiments during your improvement project. These experiments will have clear objectives and will undergo appropriate levels of Measurement Systems Analysis. This module also aims to provide you with the understanding of how to analyse and interpret the results from these experiments, and then optimise the process further.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to identify and manage Experimentation & Identification through the following methods:

- Resource material to learn about the different facets of Experimentation & Identification, and the models and tools we can use to improve it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at your experimentation techniques and consider how effectively they are planned and conducted.
- Completion of the various tools that you will learn about during this module in relation to your own organisation or area of influence.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Experimentation & Identification, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Complete Experimentation & Identification during projects to highlight areas that can be further optimised within the process, as well as any successes and failures that arise as a result.
- Identify and prioritise factors, ideas and solutions.
- Create Control Plans to ensure the modified process continues to be successful by assigning responsibilities, maintaining the skills of involved personnel and clearly specifying the procedure.
- Conduct more useful experiments and interpret their results to better optimise your improvements through the use of the varying tools introduced during this module.
- Conduct structured benchmarking to support target setting.

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Experimentation & Identification and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).

Unit 9 - Data Analysis & Basic Statistical Measures

Curriculum Intent (Subject Content)

The purpose and scope of this area is to develop your knowledge and understanding of Data Analysis & Basic Statistical Measures within an Improvement Project in order to give relevant insight into the accuracy, normality, reproducibility and repeatability of our data.

We will use the following statistical tools to serve this goal:

- Spreadsheets and pivot table analysis using statistical analysis software (e.g., Microsoft Excel),
- Control charts, attribute data, principles of normality,
- Measures of central tendency and spread.
- Measurement Systems Analysis.

The aim of this module is to enable you to gain an understanding of how to properly analyse the data you receive during an improvement project, and to be able to reproduce results from driven data analysis and its accompanying graphical/visual representation. This will allow you to understand variability, including standard deviations. Your results must be measurable to determine whether your project has been a success.

Curriculum Implementation (How the subject areas will be taught including the methods, tools, resources)

Within this module, you will learn to identify and manage Data Analysis & Basic Statistical Measures through the following methods:

- Resource material to learn about the different facets of Data Analysis & Basic Statistical Measures, and the models and tools we can use to improve it within our organisation or area of influence, supported by One-to-One Teaching & Learning.
- Quizzes and activities built into the resources and the chatroom to deepen understanding and provide opportunity to practically apply the knowledge and skills you have gained in this module,
- Project: The project format will look at the data set that you have collected throughout the previous modules and ask you to conduct a statistical analysis of it, whilst considering the reproducibility and repeatability of the data points,
- Completion of the various tools that you will learn about during this module in relation to your own organisation or area of influence.

Curriculum Impact (What will the apprentice be able to do once the subject is mastered)

Once you have developed the knowledge and understanding of Data Analysis & Basic Statistical Measures, you will be able to apply this understanding to your own role using the methods of selection for suitability within differing daily activities that will include:

- Complete Data Analysis & Basic Statistical Measures during projects to give insight into the accuracy, normality, reproducibility and repeatability of your data set,
- Understand the principles surrounding data analysis and why it is important to validate the integrity of your data,
- Become familiar with the tools and techniques available to you for the purpose of Data Analysis, and take advantage of them in order to know how to best apply them to your work,

You will demonstrate this through the completion of activities for:

- Assignment/Professional Discussion - To reflect upon your acquired knowledge, discussing the factors surrounding Data Analysis & Basic Statistical Measures and their relevance to your own organisation.
- Project Completion,
- How the module area taught has impacted upon you as a Manager, and what this has equipped you to be able to do within a) Your role and b) In the wider perspective (This will be completed as part of your monthly review with your tutor and employer).