

Education and Training Prospectus

Autumn / Winter 2010



For full details on all programmes and to book places:

Telephone: 0161 875 2525

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Web: www.manufacturinginstitute.co.uk

The Manufacturing Institute is dedicated to developing people, supporting improvement and creating leaders. Our highly acclaimed training and education courses deliver proven business benefits to manufacturers both large and small. In addition to our range of public programmes we can deliver standard courses in-company or develop bespoke training to match your specific skills development needs.



£1,000 grant support

The Manufacturing Institute's training and education programmes can be eligible for up to £1,000 grant support for up to 3 individuals under the Train to Gain Leadership and Management programme in the North West. Slightly different arrangements apply in other regions. Please ask for details or talk to your Business Link skills broker.

Continuous improvement

In the interest of continuous improvement, outline syllabuses may be subject to modification.

Additional in-company courses

In addition to in-company delivery of our public programmes we can offer short courses focused on particular lean tools and techniques.

Two-day short courses:

- What's Lean?
- How2 Problem Solve workshop
- How2 5S and TPM workshop
- How2 Do Lean

NVQ in Business Improvement Techniques levels 2 and 3

A nationally recognised qualification in lean manufacturing – which can attract Train to Gain funding

Six Sigma Green Belt

Start date and location: Various dates available for in-company delivery

Duration: 10 study days

Student profile: CI managers, production and quality managers

Course fees: Prices available upon request

The Six Sigma Green Belt course is designed to equip delegates with the knowledge and skills required to successfully implement Six Sigma projects creating savings of between £25,000 and £100,000. Six Sigma Green Belts are part-time Six Sigma practitioners who are trained to employ the DMAIC problem solving approach within their own work area.

Course structure

The programme is delivered by an experienced Manufacturing Institute Black Belt practitioner. The training normally occurs in 2 blocks of 5 days, separated by a 4 week break to enable progression of the student's project. Project mentoring support is provided.

Training is extremely interactive. Candidates are expected to contribute to discussions and share their own experiences throughout the training.

- Practical group and individual exercises
- Worked examples
- Seminar type case discussions
- Using Minitab and Excel to analyse real data
- To achieve Green Belt certification students must complete an in-company project and submit written reports detailing quantifiable benefits (with sponsor sign-off) for assessment



Outline syllabus

- Six Sigma overview
- Voice of the customer
- Project definition and chartering
- Process mapping
- Cause and effect and failure mode effects analysis
- Basic statistics and principles of variation
- Introduction to Minitab and graphical analysis
- Control charting and statistical process control
- Measurement systems evaluation
- Capability analysis

Week 2

- Project status review
- Introduction to hypothesis testing
- Chi squared
- Analysis of variance
- Correlation and multiple regression
- Multi-vari studies
- Introduction to design of experiments
- Application of lean/sigma
- Process control
- Managing the project and team

Accelerated Route to Lean Manufacturing

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 1 day a week for 12 weeks

Student profile: Production managers, team leaders and supervisors

Course fees: Prices available upon request

The Accelerated Route to Lean Manufacturing provides tried and tested, practical manufacturing tool kits for speedy bottom-line gain. This is a results-driven programme for those who want to become champions of lean manufacturing within their own workplace. Over 500 manufacturing professionals have applied their learning to create hundreds of thousands of pounds worth of productivity improvements.

Course structure

A practical, hands-on programme focused on eliminating waste and driving up efficiency across the total production system - from supplier to customer.

- 'Learn by doing' - practical forums combined with classroom based sessions
- Best practice factory visit
- Optional in-company improvement project with practitioner supervision to gain a Manufacturing Institute Fellowship in Lean Manufacturing

"I was awarded a Fellowship in Lean Manufacturing after pursuing a project to encourage our shop floor teams to embrace lean thinking. Within a matter of weeks, operational staff had implemented 230 improvements. The introduction of 5S and autonomous maintenance has made a big difference to our bottom line."

Tony Hayden, Deputy Bronze Manufacturing Manager, Wolstenholme International.



Outline syllabus

Pre-course session includes a visit to Jaguar Land Rover

Module 1: Lean thinking and awareness

Module 2: World class manufacturing – people and process site visit

Module 3: Value stream identification

Module 4: VSM I – the current state

Module 5: VSM II – the future state

Module 6: Process mapping and blitz events

Module 7: Layout and cell design

Module 8: Problem solving and quality tools

Module 9: Build to plan

Module 10: 5S/SMED

Module 11: Total productive maintenance

Module 12: Lean implementation considerations

Team Leader Development Programme

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 8 study days

Student profile: Team leaders, first line managers and supervisors

Course fees: Prices available upon request

The Team Leader Development Programme delivers both people and manufacturing skills to shake up team performance. This down-to-earth programme helps first line managers to improve management and lean manufacturing skills – ready to get more from their shop floor team and add value to their business. Participants will boost their confidence and ability to lead people, while finding out how to put new process improvement techniques into action.

Course structure

A down-to-earth, hands-on programme delivering a practical tool kit of skills that can immediately be applied at work.

- Combines best practice factory visit with workshops and seminars
- Delivered by high achieving manufacturers who've been there and done it
- Totally relevant to the challenges of modern manufacturing
- Two modules per day over eight study days
- In-company mentor supports workplace implementation of learning

“Before the course I hadn't even heard of 5S and now I'm going to introduce it to improve efficiency and health in the factory. I'm also now more aware of the impact good internal communication can make and how to collect, analyse and share information with other departments.”

**Andrew Jones, Factory Supervisor
Biojet International**



Outline syllabus

- Module 0: Manager mentor session
- Module 1: From old to new style shop floor behaviour and culture
- Module 2: Understanding teams
- Module 3: Communication and influencing skills
- Module 4: Managing your time and yourself
- Module 5: Presenting to teams
- Module 6: Performance management
- Module 7: Active leadership
- Module 8: Employment law
- Module 9: Health and safety
- Module 10: Visit to Best Factory Award winning site
- Module 11: Lean manufacturing – an overview
- Modules 12 - 14: Elements of a process improvement workshop
- Module 15: Supplier relationships and summary

Lean Learning Academy

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 2 full weeks

Student profile: Production managers and team leaders

Course fees: Prices available upon request

The Manufacturing Institute has teamed up with Jaguar Land Rover to offer an exceptional lean manufacturing education programme at the company's Lean Learning Academy. The Academy teaches lean leadership skills and techniques to supervisors and managers from Jaguar Land Rover and now, through The Manufacturing Institute, this internationally renowned learning is open to other manufacturers.



Course structure

The Lean Learning Academy is completed over two weeks and covers a variety of lean principles. These are taught via a mixture of classroom based teaching techniques, practical tasks, and experience working on the production line. The course gives delegates the opportunity to work in the Jaguar Land Rover plant and experience the operations in a working environment.

Delegates are able to learn from Jaguar Land Rover and in effect use the Halewood plant as a learning aid.

“Since I attended the Lean Learning Academy I have adapted some of the tools for process management and for standardisation and visual management. I have begun to implement them in my factory with great success.”

**Joseph Norris, Shift Manager,
Johnson Controls**

Outline syllabus

Week one

- Safety and introduction
- Team exercise
- Visual factory and 5S
- Plant tour
- Communications
- Driving change
- Policy deployment tools
- Synchronous material flow
- SPC/Andon/QPS/WES/Yamazumi
- Kaizen
- Quick changeover
- Problem solving
- Quality mapping
- Health and safety

Week two

- Process confirmation
- Total preventative maintenance
- Shop floor experience
- Value stream mapping
- Lean leadership
- Senior executive forum
- Presentations

Lean Immersion Day

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 1 day

Student profile: Senior executives from across the business

Course fees: Prices available upon request

Another unique lean learning experience at the Jaguar Land Rover Halewood plant is the Lean Immersion Day. This is a full day experiential visit to the plant which is widely recognised as a centre of excellence in lean manufacturing.

The Lean Immersion Day is ideal for companies that are in the early stages of their lean journey and who wish to gain a better understanding of what excellence in lean looks like in practice. It also provides valuable lessons on how to lead a lean improvement programme and foster a continuous improvement culture. No prior knowledge of lean is required and the day is relevant to senior managers across all business functions.

Course structure

During the day delegates will tour the body assembly line to see policy deployment at different levels, the application of visual management and the company's approach to team based problem solving and concern escalation. They will visit the Operations Director's nerve centre and tour the trim assembly line to see how the business employs Standard Operating Procedures, line balance aids, an Andon system and see how error proofing is built-in to the process.



Outline of the day

- Jaguar Land Rover's lean journey presentation
- Operations Director 'board room' – top level policy deployment
- Production area tour – cascade of policy deployment
- Lunch break
- Production area tour – standardised work tools and techniques, Andon
- Value stream mapping – paint shop application
- Lean leadership and behaviours
- Question and answer session

How2 Do Lean

Start date and location: Various dates available for in-company delivery

Duration: 2 days

Student profile: Team leaders, first line managers and supervisors

Course fees: Prices available upon request

This highly practical workshop is geared towards students that prefer a hands-on approach to learning. Employing the 'tell me, show me, let me' style of delivery this course teaches the fundamentals of lean in a way that is activity driven as opposed to classroom lecturing.

Course structure

This fast-track workshop is delivered by highly experienced lean practitioners who will share their skills and knowledge in a way that produces high absorption rates and engenders enthusiasm amongst the group to make a real difference in their own workplace:

- No big folders
- Minimal slides
- Dynamic toolkit
- Uncomplicated activities
- Focused on bottom line impact
- Instant results
- Flexible to business needs
- One-on-one coaching
- Applicable across all sectors

"The main thing that was good about the workshop was the quality and delivery of the training. It taught me a lot about teamwork, as I had never met the other trainees and we still seemed to come together as a team. It was also well structured – not too little and not too much, just the right amount to get the brain working."

**Howard Wright, Operations Manager
Flexcrete**



Learning outcomes

- Awareness of lean principles, tools and techniques
- Meeting legal requirements for health and safety
- Understanding and applying problem solving tools and techniques
- Workplace organisation and 5S
- Understand the impact of visual management
- The ability to continually seek out opportunities for improvement
- Opportunity to understand, practice and hone communications skills under coaching conditions

The workshop can be combined with follow-on coaching and support in the workplace by the practitioner to ensure that the lean improvements are truly embedded.

Lean Leadership Programme

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 1 day a week for 5 weeks

Student profile: Directors and senior managers

Course fees: Prices available upon request

This is the only lean programme that gives senior management the full range of skills and techniques needed to develop and lead a successful lean enterprise.

- How to foster the right culture for a lean organisation
- How to manage resistance to change within the organisation
- The business requirements for a successful lean implementation
- How to develop a business strategy founded in lean
- The critical success factors in lean implementation projects and common reasons for failure

Course structure

A concentrated programme combining presentations, workshops, lean simulations and an inspiring factory visit.

“My company will definitely reap the rewards of me coming on the programme. It is pitched at the right level from an organisational perspective and it has helped in my own CPD. I used to look at some things differently – I now look at everything differently.”

**Kevan McElroy, Manufacturing Director
Senior Hargreaves**



Outline syllabus

Modules 1 and 2: Lean leadership

To provide delegates with an insight into how exceptional leadership is essential as part of the strategic change process.

Module 3: Best practice factory visit

To exhibit how culture can be successfully changed within a business.

Module 4: Lean accounting

The harmful effects of traditional cost accounting and how flow accounting can aid value stream decision making.

Module 5: Value Stream Mapping and change leadership for lean

Overview of Value Stream Mapping, lean maturity assessment and policy deployment.

Lean Office – Foundation

Start date and location: Various dates available for in-company delivery

Duration: 5 study days

Student profile: Office and departmental managers; team leaders and supervisors

Course fees: Prices available upon request

Lean Office – Foundation provides tried and tested, practical lean tool kits to improve business processes. The first of a two stage lean practitioner development programme Lean Office – Foundation is a results-driven training course for those who want to lead the implementation of effective lean initiatives within the office environment and support organisation-wide improvement strategies.



A lean office can not only reduce waste and cut processing times but it can also deliver a better and more responsive customer experience.

Course structure

A practical, 5 day hands-on programme focused on reducing costs, eliminating waste and driving up efficiency within business processes.

Splitting up the classroom training into manageable chunks interspersed with periods of in-company project work gives students the opportunity to put the theory into practice before progressing to learn more advanced tools and techniques.

“Our 16 week lead time expected by the customer was consumed by up to 12 weeks in the office and design process – squeezing manufacturing and causing production and procurement to try to ‘second guess’ what was required.”

Outline syllabus

Module 1: Lean thinking & awareness

- Understanding customer value
- Waste in business processes
- Introduction to Value Streams

Module 2: Mapping the process

- Mapping the current state
- Creating a future state
- Creating a continuous improvement culture

Module 3: A productive workplace

- Measuring improvement
- 5S in the office
- Visual management
- IT in the office

Module 4: Optimising flow

- Lean layout
- The lean call centre
- Running kaizen events

Module 5: Delivering quality

- Fundamentals of quality
- Error prevention
- Problem solving approaches
- The 7 quality tools
- Effective teams

Lean Office – Champion

Start date and location:	Various dates available for in-company delivery
Duration:	4 study days
Student profile:	Office and departmental managers; team leaders and supervisors
Course fees:	Prices available upon request

Lean Office – Champion is a practical, four day programme focused on developing the knowledge and capabilities required to initiate and lead an improvement programme in an office based environment. This programme builds upon the Lean Office - Foundation level giving the student the confidence and ability to use value stream identification/mapping methodologies and then employ appropriate lean tools and techniques to improve business processes to reduce cost and deliver a better customer service.

Course structure

The programme combines presentation, case studies, multi-media and practical activities to develop an internal champion of lean with the skills and capability to:

- Lead a team to map value streams
- Identify areas for improvement and propose a stream of activities to address these
- Understand how to communicate targets etc to the greater workforce and set up on-going monitoring systems with appropriate performance indicators/metrics
- Initiate and then manage departmental improvement activities
- Understand the principles and not just the tools of lean – so they know the why as well as the how
- Be able to draw from a portfolio of tools and techniques and apply them appropriately
- Understand how soft skills such as leadership, team working and coaching are essential to sustainable improvement



Outline syllabus

Module 1: Leading change

- Leading change
- Defining customer value
- Tesco case study
- The Kano model – explained
- Steps to delivering value
- Measuring customer value
- Visual management
- Margin management

Module 2: Understanding the process

- The lean practitioner's role
- Video – DWP kaizen process
- Value Stream Identification
- Value Stream Mapping
- Case study for VSM

Module 3: Mapping the process

- Value Stream Mapping
- VSM case study

Module 4: Managing the improvement process

- Project charters
- A3 reporting
- Managing the process
- Holding effective meetings
- RACI charts

Certificate in Manufacturing Operations

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 8 months

Student profile: Production managers; engineering managers and team leaders

Course fees: Prices available upon request

The Certificate in Manufacturing Operations is a derivative of the highly acclaimed and long standing Professional Diploma in Manufacturing, and comprises the seven 'Manufacturing Education' modules from the Diploma course. This Certificate programme is open to anyone with several years manufacturing experience, irrespective of any formal qualifications.

Course structure

The programme consists of seven self-contained modules each delivered over one month. Most modules involve 3 or 4 days taught sessions (normally a Thursday and Friday plus one Saturday a month). In addition approximately 25 hours per month home study is required. All modules rely heavily on case studies and practical industrial examples, and are assessed by a 2,500 word in-company assignment intended to benefit the student and also drive their learning back into their employing organisation for both immediate and long term business benefit.

Students who successfully complete the Certificate in Manufacturing Operations may wish to progress onto the Certificate in Manufacturing Management or the full Professional Diploma in Manufacturing programme.



Outline syllabus

These modules teach the major manufacturing methods and techniques to deliver improved customer service, increased sales and reduced costs.

Manufacturing education modules:

- 1: Manufacturing strategy
- 2: Manufacturing processes and types
- 3: Supply chain management
- 4: Gaining and keeping control of the manufacturing environment
- 5: The role of projects in manufacturing improvement
- 6: Simplifying and improving the production process
- 7: Automation and the use of computer systems

Certificate in Manufacturing Management

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 8 months

Student profile: Production managers; engineering managers and team leaders

Course fees: Prices available upon request

The Certificate in Manufacturing Management is a derivative of the highly acclaimed and long standing Professional Diploma in Manufacturing, and comprises the three 'Personal Effectiveness' and four 'Business Awareness' modules from the Diploma course. This Certificate programme is open to anyone with several years manufacturing experience, irrespective of any formal qualifications.

Course structure

The programme consists of seven self-contained modules each delivered over one month. Each module involves 3 or 4 days taught sessions (normally a Thursday and Friday plus one Saturday a month). In addition approximately 25 hours per month home study is required. All modules rely heavily on case studies and practical industrial examples, and are assessed by a 2,500 word in-company assignment intended to benefit the student and also drive their learning back into their employing organisation for both immediate and long term business benefit.

Students who successfully complete the Certificate in Manufacturing Management may wish to progress onto the Certificate in Manufacturing Operations or the full Professional Diploma in Manufacturing programme.



Outline syllabus

These modules develop management skills and enhance appreciation of the wider manufacturing environment.

Personal effectiveness modules:

- 1: Leadership and managing change
- 2: Developing others
- 3: Developing yourself

Business awareness modules:

- 4: The future manufacturing enterprise
- 5: Global competitiveness
- 6: Customers and markets
- 7: Finance and accounting for manufacturing managers

Professional Diploma in Manufacturing

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 2 years

Student profile: Production managers; engineering managers and team leaders

Course fees: Prices available upon request

The nationally recognised Professional Diploma in Manufacturing is a results driven course geared towards developing people and their management skills. Diploma graduates have consistently demonstrated greater confidence, motivation and effectiveness and have delivered real benefits to their companies. This programme is open to anyone with several years manufacturing experience, irrespective of any formal qualifications.

Course structure

The programme consists of fourteen self-contained modules each delivered over one month. Most modules involve 3 or 4 days taught sessions (normally a Thursday and Friday plus one Saturday a month). In addition approximately 25 hours per month home study is required. All modules rely heavily on case studies and practical industrial examples, and are assessed by a 2,500 word in-company assignment.

At the end of the programme students are required to undertake an in-company improvement project that is intended to benefit the student and also drive their learning back into their employing organisation for both immediate and long term business benefit.

The Diploma offers a progression route to the MSc in Manufacturing Leadership and other Masters programmes.



Outline syllabus

Personal effectiveness modules:

- 1: Leadership and managing change
- 2: Developing others
- 3: Developing yourself

Business awareness modules:

- 4: The future manufacturing enterprise
- 5: Global competitiveness
- 6: Customers and markets
- 7: Finance and accounting for manufacturing managers

Manufacturing education modules:

- 8: Manufacturing strategy
- 9: Manufacturing processes and types
- 10: Supply chain management
- 11: Gaining and keeping control of the manufacturing environment
- 12: The role of projects in manufacturing improvement
- 13: Simplifying and improving the production process
- 14: Automation and the use of IT

MSc in Manufacturing Leadership

Start date and location: Visit www.manufacturinginstitute.co.uk/training

Duration: 2 years plus dissertation

Student profile: Middle and senior managers, directors and CEOs

Course fees: Prices available upon request

The MSc in Manufacturing Leadership is an exclusive leadership programme specifically designed for manufacturers. Developed and delivered by The Manufacturing Institute in collaboration with Lancaster University, its focus is to equip existing and future manufacturing leaders to champion enterprise and advance wealth-generation capacity within manufacturing.

It combines Manufacturing Institute know-how with leading-edge academic insight resulting in a prestigious qualification from the internationally renowned Lancaster University Management School, a triple-accredited, world-ranked management school, consistently among the UK's top five.



The MSc has been designed to develop an individual's leadership qualities and effectiveness and to provide the essential knowledge and understanding required to develop, sustain and grow a manufacturing business.

Course structure

The part-time taught course takes 2 years plus a further six months to complete a dissertation. The programme comprises six modules each delivered by a senior academic or industrialist and comprises a set of core learning materials delivered via the web, four workshops and three facilitated action learning sets.



Outline syllabus

Module 1: Leadership

- Leadership styles
- Motivation and coaching
- Team building

Module 2: Global markets and future manufacturing

- Global markets
- Trends and drivers
- Change management

Module 3: Generating wealth in manufacturing

- Finance and accounting
- Business planning

Module 4: World class manufacturing practices

- Best practice and benchmarking
- Supply and sourcing

Module 5: Manufacturing enterprise creation and development

- Markets and competition
- Developing and deploying strategy

Module 6: Innovation

- Innovation and creativity
- New product development
- Project and risk management



The Manufacturing Institute is an independent charity - driven by manufacturers for manufacturers. Since its formation in 1994, The Manufacturing Institute has helped transform manufacturing performance, working with over 4000 companies to gain competitive advantage from high impact skills building and productivity improvement programmes.



The Manufacturing Institute's Make It in Manufacturing campaign aims to help attract the brightest and best new talent into manufacturing. This national initiative is seeking to raise the profile of the sector and promote manufacturing as an exciting and rewarding career destination for young people. For more information visit www.makeit.org.uk

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