MANUFACTURING ENGINEER DEGREE APPRENTICESHIP LEVEL 6

UWE Bristol | University of the West of England

For new or existing staff

The standard offers an exciting opportunity for those looking to progress their engineering career by gaining a university degree.

Delivered in partnership with UWE Bristol, this apprenticeship will allow you to gain a comprehensive understanding of central engineering concepts and learn to apply them directly to practical challenges in your workplace.

You'll also develop professional skills to use throughout your career, including creative problem solving, manufacturing management, computer-aided design (CAD), modelling, simulation, teamwork, and innovation.

Qualification

BEng (Hons) Mechanical Engineering with Manufacturing accredited by the Institution of Mechanical Engineers (IMechE).

Completers may want to progress to MSc in specialised engineering postgraduate degree.

Delivery model and duration:
Delivery: Part-time
Year 1: 2 days/week at college
Year 2: 1 day/week at college
Year 3 and 4: 1 day/week at UWE Bristol

Duration: 4 Years

Ideal for:
- Manufacturing engineer
- Industrial engineer
- Process engineer
- Production engineer

Benefits to business:
- Fill skills gaps in your organisation
- Keep the business up to date with the latest industry knowledge and innovative practice
- Attract promising new talent or develop existing employees looking to progress in their careers
- Benefit from full support from GC

Benefits for learners:
- Combine on-the-job training with academic study to gain the latest technical knowledge and practical industry experience.
- Gain a university degree at no cost
- Eligible for Incorporated Engineer (IEng) professional status after successful completion

Entry Criteria:
Candidates will typically have:
5 GCSE's at Grade C or above, including Maths, English and a Science, Technology or Engineering related subject and A Levels at grade C or above in both a Maths-based subject and a Science, Technology, Engineering or additional Maths-related subject, or 90+ credits in an Engineering BTEC at level 3. Applicants with considerable relevant work experience, will be considered on individual basis, subject to meeting the Maths requirement (Grade C or above in Maths at A Level or equivalent).

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Gloucestershire College

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End Point Assessment

The End Point Assessment (EPA) is an opportunity to show an independent assessor how well apprentices can carry out the occupation they have been trained for.

It will assess the apprentices overall occupational competence against the knowledge, skills and behaviours detailed in the standard.

Project with report

You will complete a project and write a report. The title and scope must be agreed with the EPAO at the gateway. The report should be a maximum of 9000 words (with a 10% tolerance).

You will have 20 weeks to complete the project and submit the report to the EPAO.

You need to prepare and give a presentation to an independent assessor. Your presentation slides and any supporting materials should be submitted at the same time as the project output. The presentation with questions will last at least 60 minutes. The independent assessor will ask at least 5 questions about the project and presentation.

Professional discussion underpinned by a portfolio of evidence

You will have a professional discussion with an independent assessor. It will last 60 minutes. They will ask you at least 5 questions. The questions will be about certain aspects of your occupation. You need to compile a portfolio of evidence before the EPA gateway. You can use it to help answer the questions.

Duties developed during the apprenticeship will include:

- Lead a safety culture in their defined work area at all times, ensuring their own safety and the safety of others.
- Ensure that manufacturing engineering projects comply with legislation, compliance testing, regulatory requirements, and sustainability requirements.
- Be proactive and take responsibility for identifying, developing and maintaining own personal and professional development.
- Work independently or as part of a team to provide specialist manufacturing engineering leadership.
- Determine the type and level of technical data analysis and information required to complete the manufacturing engineering project or task outcome.
- Plan, organise and manage resources such as people, equipment, components and data to monitor progress, identify risks and any relevant mitigation to meet project or task outcomes.
- Lead and deliver manufacturing projects or programmes of work to the agreed requirements, including schedule, quality and budget.
- Develop and maintain effective working relationships with stakeholders.
- Determine the appropriate problem solving and diagnostic tools and techniques to be used. Lead the problem-solving activity to enable development and modifications or updates to manufacturing facilities, systems or equipment.
- Identify and lead improvement activities such as supporting automation, digital transformation and other technological developments.
- Produce validated designs, developments, modifications or updates to manufacturing facilities, systems or components through computer aided design, modelling, “live” testing or using virtual simulation software to industry standards.
- Ensure all project or work programme documentation has been completed correctly and accurately to ensure it meets organisational compliance, industry standards or Key Performance Indicators (KPIs) and traceability requirements.
- Produce technical documentation with applicable supporting data or information, as required, to inform project outcomes and decision making.
- Identify and share good practice and work collaboratively.

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