

# MACHINIST - ADVANCED MANUFACTURING ENGINEERING Apprenticeship

## STUDENT FACTSHEET YOUR FUTURE STARTS HERE

Machinists in the Advanced Manufacturing Engineering sector are predominantly involved in highly skilled, complex and precision work, machining components from specialist materials using conventional and/or CNC machine tools such as centre lathes, vertical and horizontal milling machines, horizontal and cylindrical grinding machines, electro discharge machines, single and multi-axis CNC machine tools centres.

### Key Information

Level	3
Duration	Typically 45 months
Entry requirements	- 16 years or over. - Please contact our Apprenticeship team for further entry requirements.
Delivery	A minimum of 30 hours of on the job training at work place per week including a day/ block release to study theory at our Uxbridge/ Hayes/ Harrow campus
Key responsibilities	They will be expected to be able set up, operate and adjust/edit equipment settings as applicable to the machine tool being used. When using CNC equipment they will be expected to be able to produce, prove and/or edit programmes. During and on completion of the machining operations they will be expected to measure and check the components being produced and make adjustments to the equipment/programme to ensure components meet the required specification.
Qualifications	<ul style="list-style-type: none"> <li>• An employer approved Level 2 Foundation Competence qualification</li> <li>• An employer approved Level 3 Development Competence qualification</li> <li>• An employer approved Level 3 Development Technical Knowledge qualification</li> <li>• Level 2 English and maths</li> </ul>
Professional Recognition	Completion of the Apprenticeship is designed to be recognised by relevant Professional Engineering Institutions at the appropriate level of professional registration (EngTech).

### Choose a Trusted Provider

 <p>We are a top provider in London with consistently high success rates</p>	 <p>We are the largest college group providers of apprenticeships in west London</p>
 <p>We work with major companies including British Airways, Brunel University London &amp; Menzies etc.</p>	 <p>Most of our apprentices secure employment at the end of their apprenticeship</p>
<p>Discounted travel with an Apprentice Oyster card</p>	<p>Discounts on shopping with an NUS Apprentice Extra Card</p>
<p><b>Employers involved in creating this standard:</b> BAE Systems plc, Semta Limited, Airbus Group, The Institution of Engineering and Technology, Gama Aviation Ltd, Harrods Aviation Ltd, British Airways, Marshall Aerospace and Defence Group, UTC Aerospace Systems, Resource Group, MBDA (UK) Ltd, GTA England Ltd, Rolls-Royce plc, NFEC Ltd, GKN Aerospace, Royal Aeronautical Society, Royal Air Force Cosford, Royal Navy, Cooper &amp; Turner, Nikken Kosakusho Europe Ltd, Edward Pryor &amp; Son Ltd, Newburgh Precision, Institution of Mechanical Engineers, Siemens plc, Jaguar Land Rover, Toyota Motor Manufacturing (UK) Ltd, BMW, The Engineering Employer Federation, Leonardo Helicopters UK, Babcock International Group, Mersey Maritime Group.</p>	

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**Apprenticeships & Skills**  
Harrow, Richmond & Uxbridge Colleges

## Sample Modules and Content

### Specific Specialist Knowledge

understand mathematical techniques, formula and calculation involved in the machining processes such as speeds and feeds, calculating angles/tapers, material removal

understand the practical and theoretical uses of the machines used, and their applications.

understand the work-holding devices, cutting tools, and setting up procedures, in adequate depth to provide a sound basis for carrying out the activities, correcting faults and ensuring the work output is to the required specification

### Specific Specialist Skills

read and interpret relevant data and documentation used to produce machined components

determine the most efficient and effective approach to machine the component using a range of tools, machining process and Techniques

select and set up the correct tooling and work holding devices

set and adjust the machine operating parameters to produce the work pieces to the required specification. This will involve setting feeds and speeds for roughing and finishing operations

## Frequently Asked Questions

### What is new apprenticeship standard?

Apprenticeships in England are changing. Because of government reforms, a new style of apprenticeships has been designed to meet the needs of employers, learners and providers.

### How will I be assessed?

You will be assessed continually in knowledge, skills and behaviour areas at work. Towards the end of the apprenticeship, employers and providers will 'sign-off' the apprentice as ready for the end-point assessment (EPA).

Signing-off an apprentice indicates the employer and providers believe their knowledge, skills and behaviours are the level required to gain an apprenticeship. This sign-off is called the 'gateway'.

An end-point assessment (EPA) is a collection of assessments that offers confirmation of knowledge, skills and behaviours for a particular role. The EPA must be achieved before an apprenticeship certificate can be issued. The assessment organisation and the assessor must be independent of, and separate from the training provided by the provider and employer.

### Do I already need to have a job to start an apprenticeship?

You should be working a minimum of 30 hours per week in a job. If you are unemployed, view our vacancies to apply for a job:

[www.hruc.ac.uk/apprenticeships](http://www.hruc.ac.uk/apprenticeships)

### Can I start an apprenticeship after Year 11?

Yes, you can! Young people in England must stay in education or training until they turn 18. If you're looking for a different option after Year 11, an apprenticeship could be the answer for you!

### How much does an apprenticeship cost?

There is no cost for you to do an apprenticeship if you are 16 years old or over and you will be paid a wage.

[View our vacancies to apply](http://www.hruc.ac.uk/apprenticeships)

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**Already working? Upskill!**

Turn your job into an apprenticeship. Call us on **01895 853622 / 0208 909 6328** to get you started.