

## Purpose statement

The following purpose is for the City & Guilds Level 2 Technical Certificate in Land-based Engineering (QAN 603/0145/4)

Area	Description
OVERVIEW	
Who is this qualification for?	<p>This Level 2 Technical Certificate in Land-based Engineering is for you if you are looking to start a career within the land-based engineering sector.</p> <p>A career in land-based engineering could be for you if you like to work as part of a team, working in the outdoors, enjoy problem-solving and are interested in developing your analytical and IT skills.</p> <p>Modern land-based engineering is not just about building larger and more powerful tractors and farm machinery. The skills required include robotics, computer-based imaging, GPS technology, science-based solutions, climate forecasting, technological solutions, environmental controls and much more. Although farming and food production is a major focus, the land-based engineering industry extends into everything from the countryside and forestry to sports-grounds and open spaces. This qualification could start you off on the first steps on your journey to an exciting and rewarding career.</p> <p>This qualification is suitable if you are 16 years old, or over. You may or may not have any previous knowledge or experience in land-based engineering.</p> <p>You will gain an understanding of the skills and knowledge that are important when you are working in a land-based engineering setting, or progressing to further learning and training in this area.</p>
What does this qualification cover?	<p>This qualification covers the skills you will need to progress to further learning and training, or to enter the world of work within the land-based engineering industries. You will study the following mandatory content:</p> <ul style="list-style-type: none"><li>• Health and safety for land-based industries</li><li>• Land-based engineering workshop practices</li><li>• Transmission and driveline operation principles</li><li>• Engine operation principles</li><li>• Fabrication, cutting and joining</li><li>• Land-based vehicle electrics</li><li>• Hydraulic systems</li><li>• Land-based vehicle and machinery operation</li><li>• Working in the land-based engineering industry</li></ul>

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	<p>There is also a requirement to complete 150 hours of work experience.</p> <p>You will get lots of practice and support to enable you to develop the required skills and knowledge to prepare you for the learning and end assessment.</p> <p>Colleges and training/education centres will work with local employers who will contribute to the knowledge and delivery of training. The different ways in which centres could support your learning, by working with both local and national land-based engineering businesses, include:</p> <ul style="list-style-type: none"> <li>• structured work-experience or work-placements within their business</li> <li>• your attendance at classes or lectures given by industry experts</li> <li>• employers input into projects and exercises</li> <li>• employers who act as 'expert witnesses' to contribute to the assessment of your work.</li> </ul> <p>This practical based training is ideal preparation for gaining employment in the land-based engineering industry or further specialist study.</p>
<p>How does this qualification relate to a wider learning programme</p>	<p>This qualification provides an opportunity for you to gain real work specific skills and knowledge, and enables you to link your technical learning to the work experience part of your course.</p> <p>Throughout the qualification, you will benefit from enrichment activities to develop your employability, team work and problem solving skills. These are essential when working in industry.</p> <p>English, maths and digital technology are included within the course, which will assist you with future job opportunities or progression to higher level learning. Regular personal tutorials will help with target setting, enabling you to reflect on and improve your performance and progress.</p>
<b>WHAT COULD THIS QUALIFICATION LEAD TO?</b>	
<p>Will the qualification lead to employment, and if so, in which job role and at what level?</p>	<p>Achievement of this qualification demonstrates to an employer that you have the necessary technical skills and knowledge they are looking for when recruiting for a trainee:</p> <ul style="list-style-type: none"> <li>• agricultural machinery technician</li> <li>• land-based service engineer</li> <li>• land-based mechanic</li> </ul>

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Why choose this qualification over similar qualifications?	There are no other College-based qualifications within this suite at this Level.
Will the qualification lead to further learning?	<p>Yes. Once you have successfully completed this qualification, you could go on to an apprenticeship in Land-based service engineering, which could lead to a job as a Land-based Service Engineer.</p> <p>You could also go onto study a Level 3 College-based qualification over two years:</p> <ul style="list-style-type: none"> <li>• City &amp; Guilds Level 3 Advanced Technical Extended Diploma in Land-based Engineering (1080)</li> </ul> <p>This large qualification taken over two years will allow you to study in depth and gain advanced knowledge and higher skills that could lead to a greater range of more diverse career opportunities.</p> <p>You could also progress onto an Apprenticeship as a:</p> <ul style="list-style-type: none"> <li>• Land-based Engineer</li> <li>• Land-based Engineering Technician</li> </ul>
<b>WHO SUPPORTS THIS QUALIFICATION?</b>	
Professional/Trade Associations	<p>The Institute of Agricultural Engineers (IAgrE)</p> <p>The British Agricultural and Garden Machinery Association (BAGMA)</p> <p>The Agricultural Engineers Association (AEA)</p>
FURTHER INFORMATION	Please refer to the Qualification Handbook, available on the City & Guilds website, for more information on the structure of this qualification, the content of the units, and assessment.