

Minimum Centre Resource Requirements

The equipment and resources available to colleges and training providers is an essential element in delivering a relevant quality learning experience. New machinery is recognised as a good means of updating learners on what is available in the market place, but in most situations of little value other than operating. It is acknowledged that manufacturers and local dealers are supportive of colleges and training providers and provide access to advanced technology.

We believe that there is no substitute for good teaching, particularly as it relates to first principles, and this can be with relatively modest equipment, so long as this is up to date. There is no place for learning to take place on outdated technology, and all equipment should relate to the relevant units taught.

Another feature which is encouraged is the provision of training rigs based on test engines and transmissions which are surplus to manufacturers' needs. These are very helpful as a means of developing tool skills and the handling of heavy items. Teaching aids and resources such as tractors, attachments, test rigs, tooling and fixed equipment should be relevant to today's technology and across the range required for assessment.

Centre should own, or have access to through formal agreement specialist equipment such as digital hydraulic pressure testing, flow testing, dynamometers, data loggers and diagnostic platforms. If accessing resources through a partner, this should be defined in a formal access agreement.

There should be a rolling replacement plan for all equipment and for the majority of equipment which falls outside of the minimums noted above; this should be replaced when it is outdated.

Health and Safety

Risk Assessments and COSHH data.

Clean work-spaces with good housekeeping procedures and dress code displayed.

Staff/learner ratios of no more than 10:1.

Jacks, stands and Hoists, Lifting chains and slings.

Fume extraction.

Washing facilities.

Storage for boots, overalls.

Adequate quantities of the appropriate PPE to cover activities undertaken.

Abrasive wheels controls.

First aid facilities.

Refrigeration handling and Storage

Waste disposal and storage facilities

Spill management materials.

Tools

Two comprehensive sets of hand tools for each group.

Pillar drill, angle grinders, low voltage drills, air drills, pressure lines.

Pullers, thread cutting equipment.

Bench tools – vices, anvil, gas heating equipment.

Welding – MIG, stick, gas.

Information Technology

PC/Laptops (preferably in the workshop).
Access to technical information.
Parts lists.
Specifications.
Standard procedures.
E-Learning platforms.
Cameras (for evidence collection).

Test Equipment

Oscilloscope.
Dynamometer.
Digital Multi meter.
Dynamic timing equipment.
Hydraulic test equipment.
Low pressure measuring equipment, fuel, air and vacuum.
Diagnostics platform.
Pop tester.
Temperature measuring equipment.
Compression tester.
A range of precision measuring equipment to include but not limited to, verniers, dial test indicators, micrometers.
Torque wrenches and multiplier.
Rolling resistance gauges.
Scales/spring balance.
Graduated measuring jugs.
PAT tester.
Wheel transport and carriers.
Hydraulic press.
Comprehensive set of pullers.

Sundries

Oil, Fuel, Fluids, Electrolyte, coolant.
Filters – air, oil, fuel, hydraulic.
Nuts, bolts, washers, rivets, cable ties.
Metal, belts, chains, cables, fuses, lamps, bulbs.
O rings.
Belts.
Chains.

Staff qualifications and expertise

All trainers and assessors require to be qualified in the subject they are delivering / assessing at least to the same level as those they are teaching. No teacher will be qualified lower than Level 2

Where a teacher is qualified as an engineer but this is not within the land-based engineering discipline they will be given 36 months to develop skills and accreditation with the land-based engineering sector.

All trainers will be qualified as teachers in line with national requirements and assessors will have the appropriate qualifications to fulfil assessment and quality assurance.

Where teachers and trainers are new to the profession, they will complete teaching and qualifications with 24 months of commencing employment.

It is acknowledged that many colleges and training providers use technical instructors, these must be qualified to the same level as teachers and assessors but if not, must work under the sole supervision of an appropriately qualified teacher.

We acknowledge that newly appointed staff will not necessarily have the skills needed for, and experience of teaching. We strongly urge these to participate in the “Participative Training Techniques” course as a means of developing sufficient skills to deal with their immediate role.

Provider staff CPD and on-going development

Land-based engineering is a fast moving industry – much more than is understood by many teachers working in colleges and private training providers. Continuing Professional Development (CPD) and on-going development is an essential element of good quality training and assessment. We have the following expectation. Colleges and providers should show evidence of teachers and assessors attending manufacturers courses, attending CPD events run through the Association of Lecturers in Agricultural Machinery (ALAM), Institution of Agricultural Engineers (IAgrE) conferences, branch meetings, and trade shows such as LAMMA, etc

Senior managers must make every attempt to facilitate teachers and assessors attendance at training events and product updates.

All staff, including trainers, assessors and managers should participate in training relevant to their job roles, and training should be disseminated and cascaded to those unable to attend.

Assessors should participate in City and Guilds training and standardisation events and show evidence of their attendance.

City and Guilds expect a minimum of 20 hours CPD for all teaching staff. It is expected that they will be able to demonstrate the way in which CPD improves their teaching practice.

Part-time staff should participate in the same level of CPD as full-time teachers although the work they do outside of the college or training provider should be considered as part of the 2 hours CPD where it relates to land-based engineering. To assist with this City and Guilds will host training days in conjunction with the industry.

Expectations from Centres and Work experience providers

Quality and excellence will not happen without strong management at all levels. We have the following expectations:

Colleges and Training Providers

At a senior level, Principals and Directors need to ensure resources and staffing are allocated in line with this guidance.

Those responsible for staff development need to make sure staff participate in the training available. Manufactures offer frequent opportunities to up-date skills and knowledge and go to great lengths and expense to maintain this. Make sure teaching staff prioritise these opportunities.

Standards should be maintained at a high level. Teachers and assessors should engage in standardisation events.

Engage with employers and work experience providers. Close relationships with employers is essential in terms of securing resources and specialist expertise.

In the marketing of careers in Land-based Engineering, make sure that those staff who advise young people understand the opportunities which are available and the career progression opportunities that exist.

Employers

At a senior level needs to get involved with the management of training and education for their employees. They need to prioritise attendance and participation, making sure that supervisors and mentors are allocated, and driving overall success.

Supervisors and mentors need to have the right skills and attitude and need to be given the time to fulfil this important duty. Success depends on support at this level.

Get involved with training, making links between training received at the centre with the experience gained at work.

Take an interest in the learner seeking work experience. Contribute to the regular reviews of progress and learning.

Get involved with the training provider. Where possible contribute to the various committees and employer engagement activities. Colleges and training providers depend greatly on feedback from employers.

Facilitate training and work-experience opportunities for teachers and assessors and insist that they seize these opportunities.