

Pearson BTEC Level 4 Higher National Certificate in Mechanical Engineering for England for courses starting in Academic Year 2025/26

Course Leader:	Phil Towle
Teaching Institution:	Herefordshire, Ludlow and North Shropshire College
Campus:	Hereford
Awarding Body:	Pearson
Final Award:	HTQ Level 4 Engineering
Intermediate Award(s):	N/A
Mode of Study:	Part-time
Qualification number:	610/1231/2
Date of programme specification preparation/revision:	July 2025

Educational aims of the programme

The aim of the Pearson BTEC Higher National Certificate in Mechanical Engineering for England offers students a broad introduction to the subject area via a mandatory core of learning, while allowing for the acquisition of some sector-specific skills and experience through the specialist units in each pathway, with the opportunity to pursue a particular interest through the appropriate selection of optional units. This effectively builds underpinning core skills while preparing the student for more intense subject specialisation at Level 5. Students will gain a wide range of sector knowledge tied to practical skills gained in research, self-study, directed study and workplace activities.

QAA and professional academic standards and quality

The Pearson BTEC Higher National Certificate in Mechanical Engineering for England is located at level 4 of the Framework for Higher Qualifications (2014).

The following university and further education tutors, employers, Professional Body representatives and other individuals who have generously shared their time and expertise to help us develop these new qualifications. Employers and Professional Bodies involved have included: Alstom, BMW, Eaton, GEN 2, Jaguar Land Rover, Railtrack, Siemens, UAE Military Logistics Support, Engineering Council, Royal Aeronautical Society, Royal Academy of Engineering, SEMTA, Society of Operations Engineers, The Institution of Engineering and Technology, The Institute of the Motor Industry, The Welding Institute, NFEC (National Forum of Engineering Centres), Newport Wafer Fab Ltd, Microchip Technology Inc, SPTS Technologies Ltd, IQE Plc, Aston University, Birmingham Metropolitan College, Blackpool and Fylde College, Bridgwater College, Brunel University, Coventry University College, University of Derby, St Helens College, Teesside University, UCL, Warwickshire College, University of South Wales and Cardiff and Vale College.

National Occupational Standards

Qualifications in engineering within the UK are referenced against the Engineering Council, UK Standard for Professional Engineering Competence (UK-SPEC) which sets standards at Levels 3, 6 and 8. The Pearson BTEC Higher National Certificate in Mechanical Engineering for England is set at Level 4 and has been written with reference to the Engineering Council specification for Level 3 and 6. The content and level has been written following advice from the Professional Bodies listed

in section 1.7 above and is intended to exempt holders of this qualification from the Level 4 and 5 requirements of these bodies, and articulate with the Level 6 in engineering degree courses. Holders of a Pearson BTEC Higher National Certificate in Mechanical Engineering for England meet the academic requirements for the Engineering Council Engineering Technician Standard (EngTech).

Higher-level Skills

Students need both good qualifications and employability skills to enhance their career prospects and personal development. Pearson Higher National engineering qualifications embed throughout the programme, the development of key skills, attributes and strengths required by 21st century employers.

Where employability skills are referred to in this specification, this generally refers to skills in three main categories and also specific commercial and business skills.

- Cognitive and problem-solving skills: critical thinking, approaching non-routine problems by applying expert and creative solutions, use of systems and digital technology, generating and communicating ideas creatively.
- Intra-personal skills: self-management, adaptability and resilience, self-monitoring and self-development, self-analysis and reflection, planning and prioritising.
- Interpersonal skills: effective communication and articulation of information, working collaboratively, negotiating and influencing, self-presentation.
- Commercial skills: sector awareness, budget management/monitoring.
- Business skills: awareness of types of companies, company formation, calculating fees, project management.

Course Structure

The Pearson BTEC Higher National Certificate in Mechanical Engineering for England is a qualification with a minimum of 120 credits of which 45 credits are core and 75 are specialist.

Unit Number	Unit Title	Unit Level	Unit Credit
Core units			
4001	Engineering Design	15	4
4002	Engineering Maths	15	4
4004	Managing a Professional Engineering Project (Pearson Set)	15	4
Specialist Units			
4008	Mechanical Principles	15	4
4011	Fluid Mechanics	15	4
4013	Fundamentals of Thermodynamics and Heat Engines	15	4
4014	Production Engineering for Manufacture	15	4
4017	Quality and Process Improvement	15	4

People and their Roles and Responsibilities

Course Leader

The Course Leader is responsible for maintaining an overview of the delivery and administration of your programme of study and is assisted by the other members of the Course Team. The Course Leader will usually be your first point of contact for academic and pastoral matters.

Module Leaders

Module Leaders are responsible for the delivery and administration of individual modules/units. The Module Leader will lead the teaching on the module, and is primarily responsible for tracking student progress and providing academic support on the module.

Curriculum Team Leader/Head of Campus

The College is divided into curriculum areas, each managed by a Curriculum Team Leader or Head of Campus. The Curriculum Team Leader or Head of Campus will be your next contact point after the Course Leader. A number of curriculum areas make up a faculty.

Assistant Principal

The Assistant Principal has the responsibility for the effective management of the courses in their faculty.

Deputy Principal

The Deputy Principal is responsible for the quality processes across the College and will convene and chair the assessment board meetings as required.

External Examiner

The External Examiner (EE) is a subject assessment specialist appointed by Pearson to conduct external examination. They verify that the management of programmes and assessment decisions meet national standards. External examination is usually conducted by an annual visit, usually in the summer term.

Staff Name:	Title:	Email Address:
Dr Robert Kershaw	Course Leader	KershawR@hlcollege.ac.uk
Phil Towle	Module Leader	P.Towle@hlnc.ac.uk
Scott Marley	Module Leader	S.Marley@hlnc.ac.uk
Mike Coakham	Curriculum Team Leader	CoakhamM@hlcollege.ac.uk
Dr Jonathan Gill	Assistant Principal	GillJ@hlcollege.ac.uk
Jo Ricketts	Deputy Principal	RickettsJ@hlcollege.ac.uk
Unknown	External Examiner	Unknown

Learning and Teaching Methods

Students will learn through a series of lectures, practical sessions, workshops, seminars and tutorials. They will also be required to undertake substantial independent study. Typically, this will involve completing online activities, reading journal articles and books, watching selected videos, working through example problems, working on individual and group projects, undertaking research in the library and online, preparing assignments and presentations.

Students will be taught by a teaching team whose expertise and knowledge are closely matched to the content of the modules on the course.

In a typical week, students will normally have 6 hours of teaching. The programme is normally delivered over 30 weeks.

Means of Assessment

Students working at higher levels should be capable of undertaking independent study and research, developing strategies to improve their own performance, supported by teaching staff.

Students will be required to complete coursework as they progress through the programme and undertake assessments at the end of each semester. The assessment of Pearson BTEC Level 4 Higher National qualifications is criterion-referenced and we are required to assess learners' evidence against published learning outcomes and assessment criteria. All units will be individually graded as 'pass', 'merit' or 'distinction'. To achieve a pass grade for the unit learners must meet the assessment criteria set out in the specifications. Merit and distinction grades are awarded for higher-level achievement.

Recognition of Prior Learning (RPL) is 'a method of assessment that considers whether an individual can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills that they already possess and do not need to develop through a course of learning'. If individuals can produce relevant evidence that fully meets learning outcome requirements then RPL can be given for their existing knowledge, understanding or skills

Assessment Boards

Assessment Boards carry full responsibility for considering the performance of students and module outcomes. All grades awarded are provisional until they are confirmed at the assessment board. This usually takes place at the end of an academic year. Progression and awards follow automatically based on the credits and grades confirmed by Assessment Boards and once ratified by the external examiner.

Additional Support

Developing effective study skills is an essential element in achieving academic success. All module leaders provide individual academic support. This is in addition to Personal Academic Tutor support.

All students are provided with a Course Handbook that comprehensively outlines the programme and provides advice and guidance. Module outlines and assessment details are provided for all modules. During your studies you will have access to fully equipped classrooms, practical workshops, Library with text and electronic resources and Student Services.

The College is committed to ensuring that disabled people, including those with specific learning difficulties and/or mental health difficulties are treated fairly. Reasonable adjustments to provision will be made to ensure that disabled students are not disadvantaged. The Learning Support Service is your initial point of contact.

Entry Requirements

Entry criteria detail a typical offer but the College considers all applications on an individual basis which means that we could make offers based on qualifications, personal profile and experience. If you have any queries regarding your offer, please contact our Admissions Team.

Typical offer: For students who have recently been in education, the entry profile is likely to include one of the following:

- A* to C grade and/or 9 to 4 in GCSE Maths (or equivalent) is strongly recommended.
- A BTEC Level 3 qualification in Engineering
- A GCE Advanced Level profile that demonstrates strong performance in a relevant subject or adequate performance in more than one GCE subject. This profile is likely to be supported by GCSE grades at A* to C and/or 9 to 4 (or equivalent)
- Other related Level 3 qualifications
- An Access to Higher Education Diploma awarded by an approved further education institution
- Related work experience
- An international equivalent of the above

The College welcomes applications from motivated applicants from all backgrounds. We recognise that student potential is not always demonstrated within formal academic qualifications and welcome applications from individuals from backgrounds that are under-represented within higher education.

Course Exit Points

To achieve a Pearson BTEC Level 4 Higher National Certificate qualification a student must have:

- completed units equivalent to 120 credits at level 4
- achieved at least a pass in 105 credits at level 4.

Progression Route

The Pearson BTEC Level 4 Higher National Certificate provides a solid grounding in engineering, which students can build on should they decide to continue their studies beyond the Certificate stage onto Level 5.

The Pearson BTEC Level 5 Higher National Diploma allows students to specialise by committing to specific career paths and progression routes to degree-level study. On successful completion of the Pearson BTEC Level 5 Higher National Diploma, students can develop their careers in the engineering sector through:

- Entering employment
- Continuing existing employment
- Linking with the appropriate Professional Body
- Linking with the appropriate vendor accredited certificates [if appropriate]
- Committing to Continuing Professional Development (CPD)
- Progressing to university.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in associated course documentation e.g. course handbooks and module specifications.

Assessment Policy (including the Accreditation of Prior Learning)

The Pearson/BTEC Centre Guide to Assessment governs the rules and regulations around assessment on your programme. If you have any special needs in terms of assessment, it is your responsibility to liaise with Student Services at the College regarding those needs at the start of the academic year. If you think that you may be eligible for exemption from studying some modules on your programme because you have either prior experience or equivalent study you have already undertaken, you need to submit a claim for the accreditation of prior learning with supporting evidence. Please speak to your personal tutor in the first instance. At the start of each module, tutors will provide full details of the means by which you will be assessed in that module. This will include clear guidelines on the criteria that will be used for marking your work. The turnaround time for assessment feedback is 20 working days. During this time a sample of work is also internally quality

assured. Each module will be awarded a grade. You will receive a transcript of your module grades at the end of each academic year. Please note that any marks released prior to formal approval by the Assessment Board are provisional. The module grades contribute to your final grade.

Extenuating Circumstances for Pearson HN Programmes

If you experience circumstances that affect their ability to perform in assessments, you may be able to apply for Extenuating Circumstances. The key principle of these regulations is to provide equality for all students in relation to the assessments they are required to undertake during their course. The College aims to ensure that a student who has proven extenuating circumstances is not unfairly disadvantaged as a result; at the same time, students with extenuating circumstances will not be disproportionately advantaged over other students. Please ask your tutor for the form required to apply for extenuating circumstances, or you can find it on the Pearson Higher Education Moodle page. For Higher Education students following a Pearson programme, extenuating circumstances can be applied for using the Individual Extenuating Circumstances Request Form within 10 working days of the assessment deadline/examination sitting with accompanying third party evidence. Please note that computer problems do not constitute extenuating circumstances so you should ensure that you back up your data as you go, and that the storage device that you select is secure.

Internal Quality Assurance and Appeals Policy

Internal Quality Assurance (IQA) forms part of the College's quality assurance processes and procedures. Internal verifiers (IVs) and internal quality assures (IQAs) are responsible for monitoring and co-ordinating the assessment process and for ensuring the accuracy and consistency of assessment decisions between assessors, in accordance with the published quality assurance procedures of the relevant awarding organisation. IV/IQA is an important role as it maintains and monitors the quality and assurance of qualification and unit assessment, ensuring that certificates claimed meet the requirements of the awarding organisation and that national standards have been reliably met. Appeals against internally assessed work may be lodged: 1. Where, matched against the assessment criteria, the student believes the grade to be inappropriate. 2. Where the student believes the assessment procedures have not been applied consistently. 3. Where there is evidence of extenuating circumstances which may have affected the grade. Further information and the appeals process are documented in the Internal Quality Assurance and Appeals Policy. This is available on the Pearson Higher Education Moodle page.

Academic Misconduct

The normal expectation is that all assignments or other forms of assessment are submitted electronically, through Turnitin, an anti-plagiarism mechanism and this includes a declaration of authenticity. The College expects all staff and students to act with the highest standards of academic integrity. Academic Misconduct (cheating) is an attempt to obtain for yourself or for another an unpermitted advantage which may or may not result in a higher mark than your or his/her abilities would otherwise secure. It can occur both under exam conditions and in coursework. Suspected incidents are investigated and, if proven, will result in the student being penalised. The College's Academic Misconduct Policy defines what is meant by plagiarism and other forms of academic misconduct. This is available on Moodle. It provides clear guidelines to staff and students on the prevention of such misconduct and the procedures to adopt in suspected cases. It also indicates the disciplinary procedures and penalties that may be appropriate in proven cases. This policy is applicable to direct-funded students only.

Complaints

The College has a clear Complaints Policy which sets out the route Higher Education students can follow for formal issue resolution, if they feel they have exhausted all informal avenues. The complaints process has clearly defined stages and is managed by the Deputy Principal. The Complaints Policy is accessible via the College website and Moodle.

Virtual Learning Environment

HLNSC has its own Virtual Learning Environment called Moodle. You are asked to regularly visit the HLNSC HE Student Resources Moodle page and the HNC Early childhood Education and Care Moodle page. The course may also use Microsoft Teams and the College Engage app. Please ensure you sign up to these.

College Expectations

The College Expectations recognise that both staff and students have rights and responsibilities that help determine the ability of the College to maintain and enhance its fundamental role of teaching and learning across its higher education programmes. The expectations are made available to students on the College website and on Moodle.

HE Student Voice

The College is committed to listening to our learners and acting on their views. There will be many opportunities throughout your course of study to contribute to the development of the College, for example through: · Learner Voice Surveys · Learner Focus Groups · Student Representatives · Student Governors · Tutorial or Course Discussions. Student Representatives play an active role in improving the learner experience at college. They are volunteers from different courses, who meet regularly with College staff to discuss the issues affecting students in their areas and how they can work with the College to improve the learner experience. Student Representatives help to ensure courses run well by giving feedback to their Course and Curriculum Team Leaders. Being a Student Representative looks great on your CV and helps you stand out from the crowd if you are applying for further study or a job. It is important that anyone can apply to become a Student Representative. Good skills to have are the ability to talk and listen to other students, being able to represent others' views (whether you agree with them or not) and being sensitive to people's needs. Student Representatives are elected at the beginning of the College year. The College holds elections for Student Governors on a biennial basis. Student Governors attend meetings of the College Board of Governors to reflect the views of students at the College's highest decision-making level. Student Governors can give student opinion and thoughts on projects, initiatives, and strategy. The Student HUB coordinates nominations and voting.