



ENGINEERING COLLEGE

Pearson BTEC Level 4 Higher National Certificate in Engineering

Graduates successfully completing the Higher National Certificate will be able to demonstrate a sound knowledge of the basic concepts of engineering. They will be able to communicate accurately and appropriately and they will have the qualities of personal responsibility needed for employment. They will have developed a range of transferable skills to ensure effective team working, independent working with growing fault finding and problem-solving strategies, and organisational awareness. They will be adaptable and flexible in their approach to work, showing resilience under pressure and the ability to meet challenging targets within a reasonable, preset, timeframe. They will also demonstrate regard for the ethical responsibilities of the engineer, for cost and for the importance of protecting and sustaining the environment.

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Version 1.0

Date Published – 14/08/26

Review Date – 14/08/27

The Engineering College

HIGHER EDUCATION PROGRAMME HANDBOOK

Name of Awarding Body	Pearson Education Ltd
Delivery Organisation	The Engineering College
Organisation Location	Monks Ferry, Birkenhead, Wirral, CH41 5LH
Programme Title	Pearson BTEC Level 4 HNC in Engineering
Qualification Title	Pearson BTEC Level 4 Higher National Certificate in Engineering (General)
Qualification Code	610/3635/3
Credits	120
Total Qualification Time (TQT)	1200 hours
Relevant QAA Benchmark statements and External Reference Points	QAA Engineering Subject Benchmark (2023). Framework for Higher Education Qualifications (FHEQ)
Programme Leader(s)	Steve Watts s.watts@theengineeringcollege.co.uk
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Duration	2 nights over 2 years

Contents

ABOUT PEARSON	6
ABOUT YOUR PROGRAMME	6
ENTRY REQUIREMENTS	7
COURSE MODULES	7
UNIT OVERVIEW.....	9
Unit 4001 Engineering Design	9
Unit 4002 Engineering Mathematics.....	9
Unit 4003 Engineering Science I	10
Unit 4004 Managing a Professional Engineering Project	10
Unit 4008 Mechanical Principles.....	11
Unit 4019 Electrical and Electronic Principles.....	11
Unit 4023 Computer Aided Design and Manufacture (CAD/CAM).....	11
Unit 4024 Electro, Pneumatic and Hydraulic Systems	12
DELIVERY	12
Class Lessons and Tutorials	12
Laboratory and practical sessions	12
Educational Visits	12
ATTENDANCE.....	13
Attendance & Monitoring	13
Teaching, learning and Assessment Strategies:	13
Main Features of the Programme's Overall Assessment Scheme:	14
Feedback to Students.....	14
Methods of Assessment (including weighting of components)	15
Referral Procedures	15
What happens if you fail modules?.....	15
Assessment Boards	16
The Role of the External Examiner:	16
Appeals Procedure	16
Academic Offences	17
Plagiarism.....	17
Use of Artificial Intelligence (AI)	17
Collusion.....	18
Calculating the final qualification grade	19
Compensation:	19
Calculating the overall qualification grade:.....	19
Modelled student outcomes.....	19
REFERENCING	20
Learner support.....	20
Evaluation and revision.....	20
Student Code of Conduct.....	21
SAFEGUARDING.....	21

HEALTH AND WELLBEING	22
DATA PROTECTION	23
EQUALITY AND DIVERSITY	24
Some useful contacts and links	25

ABOUT PEARSON

Pearson are the world's leading learning company operating in countries all around the world. They provide content, assessment and digital services to learners, educational institutions, employers, governments and other partners globally. They are committed to helping equip learners with the skills they need to enhance their employability prospects and to succeed in the changing world of work. They believe that wherever learning flourishes so do people.

ABOUT YOUR PROGRAMME

The objectives of the Programme are:

- to develop the skills, knowledge and understanding students need to achieve high performance in the engineering and manufacturing environment
- to develop students with enquiring minds, who have the abilities and confidence to work across different engineering and manufacturing functions and to lead, manage, respond to change and tackle a range of complex engineering situations
- to provide the core skills required for a range of careers in the wider engineering sector, including electrical and electronics, manufacturing, mechanical, mechatronics, operations and semiconductors
- to offer a balance between employability skills and the knowledge essential for students with entrepreneurial, employment or academic ambitions
- to develop students' understanding of the major impact that new digital technologies have on the engineering and manufacturing environment
- to provide insight into engineering and manufacturing operations and the opportunities and challenges presented by a global marketplace
- to equip students with knowledge and understanding of culturally diverse organisations, cross-cultural issues, diversity and values, and to allow flexible study to meet local and specialist needs.

Graduates successfully completing the Higher National Certificate will be able to demonstrate a sound knowledge of the basic concepts of engineering. They will be able to communicate accurately and appropriately, and they will have the qualities of personal responsibility needed for employment. They will have developed a range of transferable skills to ensure effective teamwork, independent working with growing fault finding and problem-solving strategies, and organisational awareness. They will be adaptable and flexible in their approach to work, showing resilience under pressure and the ability to meet challenging targets within a reasonable, pre-set, timeframe. They will also demonstrate regard for the ethical responsibilities of the engineer, for cost and for the importance of protecting and sustaining the environment.

ENTRY REQUIREMENTS

Entry requirements and admissions.

Although Pearson do not specify formal entry requirements, as a centre it is our responsibility to ensure that the students we recruit have a reasonable expectation of success on the programme.

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

- A* to B grade and/or 9 to 6 in GCSE Math's (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 B and/or 9 to 6 (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.

COURSE MODULES

The HNC L4 in Engineering (General) is composed of course modules (Units), taught over 4 semesters. BTEC Higher National Certificate comprises 8 modules (120 credits).

A course module is delivered through timetabled activities such as lectures, tutorials, lab sessions, visits, and is assessed by written assignments, presentations, project portfolios and/or examinations.

Each course module or group of course modules is the responsibility of a member of the teaching staff who is the Module Leader and who will provide you with a scheme of work and an assessment plan for the module during the first introductory lecture.

The workload for part-time students is 2 modules per semester. In addition to scheduled tutor led sessions, students will need to plan for individual study time, which should be equivalent to the class time per week. Course modules are evaluated by students at the end of each term. The college requires all modules to be evaluated regularly, in order to maintain quality in teaching and learning. Students Feedback is an essential and valued part of this process.

Pearson BTEC Level 4 Higher National Certificate in Engineering (General)			
Unit Type	Unit	Credits	Level
Core <i>Mandatory</i>	4001: Engineering Design	15	4
Core <i>Mandatory</i>	4002: Engineering Mathematics	15	4
Core <i>Mandatory</i>	4003: Engineering Science I	15	4
Core <i>Mandatory</i>	4004: Managing a Professional Engineering Project	15	4
Optional unit	4008: Mechanical Principles	15	4
Optional unit	4019: Electrical and Electronic Principles	15	4
Optional unit	4023: Computer-Aided Design and Manufacture (CAD/CAM) Computer Aided Design (CAD) for Engineering	15	4
Optional unit	4024: Electro, Pneumatic and Hydraulic Systems	15	4

UNIT OVERVIEW

Unit 4001 Engineering Design

The aim of this unit is to develop students' skills in the mathematical principles and theories that underpin the engineering curriculum. Students will be introduced to mathematical methods and statistical techniques in order to analyse and solve problems within an engineering and manufacturing context.

On successful completion of this unit, students will be able to employ mathematical methods within a variety of contextualised examples, interpret data using statistical techniques, and use analytical and computational methods to evaluate and solve engineering and manufacturing sector problems. By the end of this unit students will be able to:

1. Create a design specification for a given design brief that meets stakeholder's requirements, along with a proposed design solution
2. Analyse possible technical solutions to implement the proposed design specification
3. Produce a design report considering all key aspects including manufacturability (or design for manufacturing and assembly) and environmental impact
4. Present the design solution to an audience, including evaluation of feedback and future improvements.

Unit 4002 Engineering Mathematics

The aim of this unit is to introduce students to the methodical steps that engineers use in creating functional products and processes as an individual or part of a design team; from a design brief to the work, and the stages involved in identifying and justifying a solution to a given engineering need.

Among the topics included in this unit are: Gantt charts and critical path analysis, stakeholder requirements, market analysis, design process management, technical drawing, modelling and prototyping, manufacturability, sustainability and environmental impact, reliability, safety and risk analyses, and ergonomics.

On successful completion of this unit, students will be able to prepare an engineering design specification that satisfies stakeholders' requirements, implement best practices when analysing and evaluating possible design solutions, prepare a written technical design report, and present their finalised design to a customer or audience.

By the end of this unit students will be able to:

1. Apply a variety of mathematical methods to a range of engineering and manufacturing sector problems
2. Investigate applications of statistical and probability techniques to interpret, organise, and present data
3. Use analytical and computational methods for solving engineering and manufacturing sector problems by relating sinusoidal wave and vector functions to their respective applications
4. Examine how differential and integral calculus can be used to solve engineering and manufacturing sector problems.

Unit 4003 Engineering Science I

This unit introduces students to the fundamental laws and applications of the physical sciences within engineering and how to apply this knowledge to find solutions to a variety of engineering problems.

Among the topics included in this unit are: international system of units, interpreting data, static and dynamic fundamentals, fluid mechanics and thermodynamics, material properties and failure, A.C./D.C. circuit theories, and electromagnetic principles and properties.

On successful completion of this unit, students will be able to interpret and present qualitative and quantitative data using computer software, calculate unknown parameters within mechanical and electrical systems, explain a variety of material properties, and use electromagnetic theory in an applied context.

By the end of this unit students will be able to:

1. Examine scientific data using both quantitative and qualitative methods
2. Apply the fundamentals of mechanical engineering systems
3. Explore the characteristics and properties of engineering materials
4. Analyse applications of A.C./D.C. circuit theorems, electromagnetic principles, and properties.

Unit 4004 Managing a Professional Engineering Project

This unit introduces students to the techniques and best practices required to successfully create and manage an engineering/manufacturing project designed to identify a solution to an engineering need. While carrying out this project students will consider the role and function of engineering in our society, the professional duties and responsibilities expected of engineers together with the behaviours that accompany their actions.

Among the topics covered in this unit are: roles, responsibilities, and behaviours of a professional engineer, planning a project, project management stages, devising solutions, theories and calculations, management using a Gantt chart, evaluation techniques, communication skills, and the creation and presentation of a project report.

On successful completion of this unit, students will be able to conceive, plan, develop, and execute a successful engineering project, and produce and present a project report outlining and reflecting on the outcomes of each of the project processes and stages. As a result, they will develop skills such as critical thinking, analysis, reasoning, interpretation, decision-making, information literacy, and information and communication technology, and skills in professional and confident self-presentation.

This unit is assessed by a Pearson-set theme. The project brief will be set by the centre, based on a theme provided by Pearson (this will change annually). The theme and chosen project within the theme will enable students to explore and examine a relevant and current topical aspect of professional engineering.

By the end of this unit students will be able to:

1. Select a project that will provide a solution to an identified engineering/manufacturing problem.
2. Conduct planned project activities to generate outcomes which provide a solution to the identified engineering/manufacturing problem.
3. Produce a project report analysing the outcomes of each of the project processes and stages.
4. Present the project report drawing conclusions on the outcomes of the project.

Unit 4008 Mechanical Principles

The aim of this unit is to introduce students to the essential mechanical principles associated with engineering applications. Topics included in this unit are: behavioural characteristics of static, dynamic and oscillating engineering systems including shear forces, bending moments, torsion, linear and angular acceleration, conservation of energy and vibrating systems; and the movement and transfer of energy by considering parameters of mechanical power transmission systems.

On successful completion of this unit students will be able to explain the underlying principles, requirements and limitations of mechanical systems.

By the end of this unit students will be able to:

1. Solve problems within static mechanical systems
2. Analyse dynamic mechanical systems
3. Investigate elements of simple mechanical power transmission systems
4. Analyse natural and damped vibrations within translational and rotational mass-spring systems.

Unit 4019 Electrical and Electronic Principles

Electrical engineering is mainly concerned with the movement of energy and power in electrical form, and its generation and consumption. Electronics is mainly concerned with the manipulation of information, which may be acquired, stored, processed or transmitted in electrical form. Both depend on the same set of physical principles, though their applications differ widely. A study of electrical or electronic engineering depends very much on these underlying principles; these form the foundation for any qualification in the field, and are the basis of this unit.

By the end of this unit students will be able to:

1. Apply an understanding of fundamental electrical quantities to analyse circuits with constant voltages and currents
2. Analyse circuits with sinusoidal voltages and currents
3. Describe the basis of semiconductor action, and its application to simple electronic devices
4. Explain the difference between digital and analogue electronics, describing simple applications of each.

Unit 4023 Computer Aided Design and Manufacture (CAD/CAM)

This unit introduces students to all the stages of the CAD/CAM process and to the process of modelling components using CAD software specifically suitable for transferring to CAM software. Among the topics included in this unit are: programming methods, component set-up, tooling, solid modelling, geometry manipulation, component drawing, importing solid model, manufacturing simulation, data transfer, CNC machine types, and inspections.

On successful completion of this unit students will be able to learn about the key principles of manufacturing using a CAD/CAM system; 3D solid models of a component suitable for transfer into a CAM system; CAM software to generate manufacturing simulations of a component; and designing a dimensionally accurate component on a CNC machine or AKM system using a CAD/CAM system.

By the end of this unit students will be able to:

1. Describe the key principles of manufacturing using a CAD/CAM system
2. Prepare 3D solid models of a component suitable for transfer into a CAM system
3. Use CAM software to generate manufacturing simulations of a component
4. Produce a dimensionally accurate component on a CNC/AM machine using a CAD/CAM system.

Unit 4024 Electro, Pneumatic and Hydraulic Systems

The aim of this module is to develop students' knowledge and appreciation of the applications of fluid power systems in modern industry. Students will investigate and design pneumatic, hydraulic, electro-pneumatic and electro-hydraulic systems. This unit offers the opportunity for students to examine the characteristics of fluid power components and evaluate work-related practices and applications of these systems.

On successful completion of this unit students will be able to learn about applications of hydraulic and pneumatic systems in the production industry, fundamental principles and practical techniques for obtaining solutions to problems, real-life applications of pneumatic and hydraulic systems, and the importance of structured maintenance techniques.

By the end of this unit students will be able to:

1. Calculate the parameters of pneumatic and hydraulic systems
2. Illustrate the notation and symbols of pneumatic and hydraulic components
3. Examine the applications of pneumatic and hydraulic systems
4. Investigate the maintenance of pneumatic and hydraulic systems.

DELIVERY

Class Lessons and Tutorials

Teaching sessions will be divided into lectures and tutorials. The support and guidance for the assessments will be provided as part of the tutorial sessions and it is mandatory for all students to attend them. During these sessions there will be opportunity to review and clarify knowledge or understanding from previous sessions.

Additionally, it is during these scheduled classes, that your understanding will be informally tested through quizzes and other such means. This will provide you and the teaching staff with a review of your progression throughout the module and semester. The results of these tests will **not** be used for your final grade.

Laboratory and practical sessions

Some modules lend themselves to practical teaching, for example Electro, Pneumatic and Hydraulic Systems. When attending laboratory and practical sessions students must remain in a group and not enter into any laboratory until advised to do so by the instructor or the lab technician. Any necessary PPE for practical sessions will be provided by the Engineering College.

Educational Visits

The Engineering College takes a proactive approach in the encouragement of events and visits for Higher Education programmes. They work to stimulate and interest students, but also to increase student knowledge and improve attitudes towards, industry and commerce. The visits and events are specifically designed to inform, involve and inspire students and to build upon and enhance transferable skills.

ATTENDANCE

Attendance & Monitoring

All students are advised that good attendance (a minimum of 80% overall each academic cycle) will give the best possible chance of success in their studies. The Operations Team is responsible for monitoring students' academic progress and this is done, in part, by monitoring attendance and engagement in classes.

Failure to attend and engage with programme requirements is likely to result in poor academic progress. Any absences due to medical reasons must be covered by a medical certificate.

Teaching, learning and Assessment Strategies:

The teaching and learning and assessment strategy of the college encourages learners to take responsibility for aspects of their learning and encourage staff to take responsibility for facilitating their learning. The balance of learner and staff responsibilities vary according to individual learner profiles, academic level and according to the nature of the learning outcomes the learners are expected to meet. Ultimately, the aim of this programme is to enable learners to progress to a high level of autonomy in learning and thus adhere to further progression.

Each academic year is divided into two terms and the college has adopted expanded delivery approach. Here learners are taught 2 units each term, which contribute to 30 credits per term and to 120 credits by the end of the HNC.

To achieve this variety of learning approaches have been integrated throughout the programme with an overall emphasis on active learner participation. Guided learning (including lectures, tutorials, workshops, group discussions, online and networked learning, video clips, case studies, and other examples of good practice), group learning and independent learning are used throughout the programme with the level of independence increasing as the learner progresses.

The teaching and learning methods used in the programme are designed to challenge the existing perspectives of the learners and encourage creative thinking. Thus, many of the approaches used, including those that are case based, set concepts and problems in a wide range of contexts to add depth and complexity to ensure an applied focus. Group learning approaches also challenge learners in several ways.

Teaching is based on research literature, professional experience and significant debate and discussion. Through didactic pedagogy learners are challenged to develop their ideas and defend their thinking.

Main Features of the Programme's Overall Assessment Scheme:

The purpose of assessment is to ensure that effective learning of the content of each unit has taken place. Evidence of this learning plus the application of the learning, is required for each unit. The assessment of the evidence relates directly to the assessment criteria for each unit, supported by the generic grade descriptors.

The process of assessment can aid effective learning by seeking and interpreting evidence to decide the stage that learners have reached in their learning, what further learning needs to take place and how best to do this. Therefore, the process of assessment adopted for this programme requires effective planning of teaching and learning by providing opportunities for both the learner and assessor to understand progress towards achieving learning goals.

The assessors and learners are actively engaged in promoting a common understanding of the assessment criteria and the grade descriptors (what it is they are to achieve and how well they can achieve it). The learners are given constructive feedback and guidance about how they may improve by capitalising on their strengths and clear constructive comments about their areas for improvement.

Assessments are constructed in the college by the qualification team and reviewed by an internal verifier. All the assessment criteria within each unit is based on evidence and based on the grade descriptors. The assessment criteria and contextualised grade descriptors are clearly indicated on each assessment to provide a focus and to assist with internal standardisation processes. Tasks and activities are selected in a manner that allows learners to produce evidence that relates directly to the assessment criteria and grade descriptors.

Formative assessment and feedback are primarily developmental in nature and designed to give feedback to the learners on their performance and progress. The key objective of formative assessment helps the College to identify learners' differing learning needs early in the programme and to make timely corrective interventions. Each learner receives formative feedback as and when needed.

Summative assessments and feedback is where learners are provided with the assignment grades contributing towards the overall grade. For summative assessment to be effective the college ensures that each learner is given additional formative feedback, to support on-going development and improvement in subsequent assignments. All formative assessments feed directly into the summative assessment for each unit and lays the foundations from which learners develop the necessary knowledge and skills required for the summative assessment.

Feedback to Students

Feedback on assessment and provisional grades will be given by your tutor. All students will be given constructive feedback providing them with the opportunity to reflect on their performance for future assignments. The feedback on all assessments will be available to the student within 3 weeks after the submission date.

Please note that all grades are provisional until confirmed and published by the Assessment Board.

Methods of Assessment (including weighting of components)

Learners must achieve a minimum of 120 credits on their programme of learning to be awarded BTEC level 4 HNC award.

The assessment is criterion referenced and this assesses the learners against published learning outcomes and assessment criteria.

All units are individually graded as Pass, Merit or Distinction.

- **To achieve a Pass**, a learner must have satisfied **all** the Pass criteria for the learning outcomes, showing coverage of the unit content and therefore attainment at Level 4 of the national framework for HNC.
- **To achieve a Merit**, a learner must have satisfied **all** the Merit criteria (and therefore the Pass criteria) through high performance in each learning outcome.
- **To achieve a Distinction**, a learner must have satisfied **all** the Distinction criteria (and therefore the Pass and Merit criteria), and these define outstanding performance across the unit as a whole.

Learners are given detailed assignment briefs which cover the unit content, learning objectives supported with Unit content and a specific Scheme of Work. All the assessment material should be valid, reliable and fit for purpose.

The assignment brief clearly specifies the mode of assessment, describing whether it is an individual task or a group task. The mode of assessment clearly describes what is expected. They are generally scenario based and comprise of presentations, independent research, reports, reflections and portfolio. The learners need to address the deadlines and the instructions specified. The learners should be familiar with the assignment procedure and should see that they receive feedback for the submitted work.

In case the learner does not meet the specified criteria, they will be asked to resubmit the assignment addressing the comments of the assessor.

The grades are finalised only after internal verification and external approval. All the assessment outcomes are announced only after going through the Assessment Board.

Learners must authenticate the evidence that they provide for assessment through signing a declaration stating that it is their own work. A learner declaration must state that:

- Evidence submitted for the assignment is the learner's own.
- The learner understands that false declaration is a form of malpractice.

Referral Procedures

What happens if you fail modules?

Failure to submit an assignment on or before a LATE submission deadline would result in a REFERRAL grade. Your tutor will provide feedback on your weaknesses so that you can improve your work and resubmit the task. If you do not submit work by the specified REFERRAL submission date, **no further extensions** will be allowed, and you will have to repeat the module.

You are allowed only ONE Attempt to re-submit the REFER element(s) of your work within a specified date. If a student fails in a Referral submission, then this module has to be retaken in another semester

Assessment Boards

Assessment board meetings are held at the end of each teaching cycle (i.e., February and August). A separate Assessment board will be held for Mitigating Circumstances and Referral submissions.

The main purpose of an Assessment Board is to make recommendations on the grades achieved by students on the individual modules, consider any cases of **academic offence such as cheating and plagiarism**, discuss the awards to be made to students and consider referrals and deferrals if any.

Please note that all grades are provisional until confirmed and published by the Assessment Board.

The Role of the External Examiner:

External examination is how Pearson checks that RCL is operating appropriate quality assurance and maintaining national standards for BTEC Higher Nationals programmes. Pearson allocates an External Examiner (EE), who is a subject expert, to conduct sampling of assessment instruments and assessed learner work in order to provide judgments and feedback. External Examiners support in identifying good practice and areas for further development, giving guidance on how assessment can be improved.

The External Examiner for this programme is:

Name: TBA

Position: External Examiner.

Please note that the External Examiner details are provided for information only. If learners have any comments or issues relating to their programme, they should contact their Unit tutor or Programme leader.

Appeals Procedure

A student who feels that, despite the above procedures, his/her work has been unfairly assessed, may submit a written appeal to the Academic Programme Leader setting out in detail, the nature of their discontent.

An appeal must be received within 2 weeks of the publication of the final results. We will aim to resolve an academic appeal within 4 weeks of receipt of the form or otherwise inform you of any possible delay.

Students have a final right of appeal to Pearson, but only if the procedures that the college has put in place have been followed see the link for more details on how to appeal to Pearson

[Internal assessment in vocational qualifications reviews and appeals policy](#). If students are still dissatisfied with the final outcome of their appeal, they can make a further appeal to the Office of the Independent Adjudicator (OIA) by emailing: enquiries@oiahe.org.uk.

Academic Offences

The Engineering College considers academic offences very serious. Academic integrity is a central theme to the quality of work produced by our students and the quality of our students in the place of work, currently and in the future.

Plagiarism

All submitted work will be checked for plagiarism. You must ensure that the assignments you submit are your own work.

- Any attempt to pass off someone else's work as your own is known as plagiarism (intellectual theft).
- To submit a very similar piece of work for two assignments is known as self-plagiarism. Work produced for an assessment in one module will not be accepted and credit provided for a second assessment in the same module or a different one.
- Where plagiarism occurs in the context of formal assessment or examinations, it constitutes an example of 'unfair practice' to which college regulations, procedures and penalties apply.
- Plagiarism is a form of cheating and is regarded as serious academic offence - and therefore carries a severe penalty.

Examples of Plagiarism include:

- Copying and pasting a source of information without the correct referencing.
- Submitting work that has been produced by somebody else as your own.
- The use of diagrams, quotations or pictures without the correct referencing.
- Use of artificial intelligence (AI) to complete any work and use it as your own.
- Self-plagiarism – The use of reusing one's own work that has previously been submitted without correct referencing.

Use of Artificial Intelligence (AI)

Artificial Intelligence is a computer-based system / tool that can support teaching and learning, but students need to be mindful of the risks and consider carefully how AI can be used as part of your programme. Students are allowed to make appropriate use of AI tools to support their personal development through research and study that may help improve their educational experience.

The Engineering College ask that all students speak with their tutor or training officer to discuss the use of AI and how this can be best engaged with to improve the learning experience.

Any individual who uses any unacknowledged content generated by artificial intelligence (AI) as part of a final / summative assessment will be in breach of this policy and will have their work referred, which means a fail. This will be classed as Academic misconduct and all relevant parties will be informed.

The college expects that at this level of learning, a competent student will be able to source, reflect and adequately paraphrase with credible evaluation information and evidence from numerous sources; this is independent thought and critical thinking. We don't expect however that for example a 2000-word essay will be totally original but will have a small percentage of similarity to other published texts, and these are clearly and adequately referenced throughout all assignments.

Collusion

A Definition:

“Collusion is the act of collaborating with someone else on an assessment exercise which is intended to be wholly your own work, or the act of assisting someone else to commit plagiarism” (Maguire, 2003).

Throughout your time at the Engineering College, you will be studying alongside other students and it is inevitable that discussion around the course, a lecture or assignment will happen.

This is not collusion, however all students must be on their guard when this active and professional discussion becomes more involved leading to determined and proactive collaboration on an assignment that should be an individual's piece of work.

At times an assignment set by your lecturer will involve group work. In these circumstances be clear of your own involvement and responsibility, utilise a professional log or diary to record significant input or discussion and the attendance of other students, and confirm what will be graded as individual and group output.

The following lists present what is acceptable and unacceptable practice (courtesy of the University of York):

Acceptable practice:

- talking about books or lectures with another student
- comparing essays and feedback after the assignment has been marked.
- working in the library together
- including ideas that another student expressed in a seminar, including a reference and in-text citation.

Unacceptable collusion:

- writing a joint set of notes with another student
- asking another student what you should include in your essay.
- including ideas that another student had in a seminar without referencing them.
- looking at another student's essay before the assignment is due.
- showing another student your essay before the assignment is due.

Calculating the final qualification grade

Conditions for awarding our HNC;

To achieve our Pearson BTEC Level 4 Higher National Certificate qualification, you must have: completed units equivalent to 120 credits at Level 4, and achieved at least a pass in 105 credits at Level 4.

Compensation:

If you have attempted but not achieved a pass in one of your Level 4 15-credit units, you can still be awarded an HNC if you have completed and passed the remaining units.

Calculating the overall qualification grade:

Your overall qualification grade is based on your performance in all units. You are awarded a pass, merit or distinction using the points gained through all 120 credits, at Level 4 for the HNC.

You must have attempted all units in a valid combination for each qualification. The conditions of award and compensation arrangements will apply as explained above. If you have been granted compensation for a unit attempted but not achieved, that unit will appear as unclassified and a 'U' grade on the notification of performance provided with your certificate.

Point boundaries Grade	Point boundaries	Points Per credit
Pass	420–599	Pass: 4
Merit	600–839	Merit: 6
Distinction	840 +	Distinction: 8

Modelled student outcomes

Pearson BTEC Level 4 Higher National Certificate:

				Student 1		Student 2		Student 3		Student 4		Student 5	
	Credits	Level	Grade point	Grade	Unit points	Grade	Unit points	Grade	Unit points	Grade	Unit points	Grade	Unit points
Core 1	15	4	4	P	60	P	60	P	60	D	120	D	120
Core 2	15	4	4	P	60	P	60	P	60	D	120	M	90
Specialist 3	15	4	4	P	60	P	60	P	60	D	120	M	90
Specialist 4	15	4	4	P	60	P	60	M	90	M	90	M	90
Specialist 5	15	4	6	M	90	P	60	M	90	M	90	M	90
Specialist 6	15	4	6	M	90	P	60	M	90	M	90	M	90
Optional 7	15	4	6	M	90	M	90	D	120	D	120	D	120
Optional 8	15	4	6	M	90	M	90	D	120	D	120	D	120
Total	120				600		540		690		870		810
Grade					M		P		M		D		M

The table above is provided as a general example of using unit grades to calculate qualification grades. They do not reflect the specifics of this qualification.

REFERENCING

The Harvard reference system is the means by which you identify books and other sources which you have used in your writing. The Engineering College recommends the use of Harvard referencing style for all assignments and project work.

It is very important to be consistent and accurate when citing references. Citations in the body of your writing should give the author's surname with the year of publication. The full details of all these references should be listed alphabetically by author name as a reference list at the end of your writing.

If you wish to acknowledge other sources that have been used in your learning these should be given in a separate bibliography. If you are writing an academic essay you need to use citations to acknowledge your sources in the following circumstances:

- If writing a dissertation or a practice-based project there is an expectation of wider reading to inform your work, it is appropriate that both a reference list and a bibliography should be submitted.
- if you are using an actual quotation from another source.
- if you are paraphrasing another source.
- if you are referring directly to another source.
- if your own writing is closely based on, or is drawn heavily from, the work of another writer.
- If you have used AI such as CoPilot or ChatGPT to assist in your research or drafting your report.
- if you wish, for some other reason, to draw attention to a source.

Learner support

The teaching philosophy at The Engineering College requires learners to be exposed to a range of learning methods and materials.

All CETTS (Combined Engineering Training Team) now support their classes using MS Classes, a suite of electronic web-based materials that permits learners access materials such as syllabi, programme handbook, reading lists, reading assignments, and PowerPoint presentations for each of their programmes.

Programme evaluation by learners is the primary method of obtaining and gauging learner feedback. The evaluation forms are comprised of both qualitative and quantitative elements. Also, learner and staff meetings, held each semester, to discuss programme issues and concerns is another way to support the learner.

Evaluation and revision

The Assessment Boards evaluates Pearson external examiner's reports every year and makes sure the action plans produced from their reports are well managed and the progress is reported to SLT (Senior Leadership Team). The College also conducts feedback on assignments to learners by a Learner tracker.

Internal verification ensures that before any assignment brief is released to learners, clear assessment criteria, and correct administrative information on assignment are included. The Internal verifier identifies what changes if any in the assignment brief are required and what corrective action should be taken by assessor and should ensure that it is fit for purpose. Internal verifiers check a range of assessment decisions for all assessors and modules by sampling some of the assignments. In case of unexpected assessment decisions, (e.g., everybody achieving Distinction in the assignment), additional sampling will be conducted on individual modules/assessors.

Student Code of Conduct

PLEASE:

- Behave in a responsible manner when arriving and leaving the College site with due regard to our residential and commercial neighbours
- ✓ Attend all your lessons on time and prepared
- ✓ Attend all workshops sessions with the appropriate personal protective equipment (PPE) worn/used correctly
- ✓ Follow the safe use of machinery for which you have been inducted
- ✓ Follow the information technology (I.T.) code of conduct
- ✓ Work with our Staff to help keep the facilities clean & tidy
- ✓ Turn off mobile phones, MP3 players & iPods during lessons
- ✓ Observe the College's Health & Safety policy and evacuation procedures
- ✓ In the event of absence please follow the College's absence policy

PLEASE DO NOT

- ✗ Wear hoods within the College premises
- ✗ Smoke on the College premises
- ✗ Bring offensive weapons onto College premises
- ✗ Enter 'staff only' areas without authorisation
- ✗ Eat or drink within teaching areas, workshops, OR corridors

SAFEGUARDING

At the Engineering College, ensuring the safety and wellbeing of our learners is extremely important to us. We want everyone to feel safe and secure during their courses, in the workplace and at home.

Safeguarding covers

- Protecting all learners from harm, regardless of their age, gender, religion or ethnicity.
- Promoting our learners' health and development.
- Taking action to ensure all our learners are kept safe.
- Preventing harm to learners including harm such as abuse, harassment, and bullying.
- Preventing learners being drawn into terrorism and being radicalised.
- Ensuring learners are in a safe environment.

You should report all Safeguarding concerns immediately by emailing

HEALTH AND WELLBEING

Follow these tips to nurture your wellbeing and increase your resilience.

1. Share

Don't keep things bottled up. Talking about your feelings with friends, family or your instructor is not a sign of weakness but of taking charge of your own wellbeing.

2. Accept who you are

You are unique, don't compare yourself to other people. Each person is on a different journey and following their own path.

3. Give to others

Helping others makes you feel better about yourself, even something as small as a smile, a thank you or a kind word.

4. Get active

Regular exercise can boost your self-esteem, help you concentrate and improve your sleep. Walk, cycle, dance or try something completely new.

5. Eat healthily

There are strong links between what we eat and how we feel. Eat regular meals and make sure you get some fruit and veg in every day.

6. Sleep well

Sleep is important to your physical and mental health. Sleep improves memory and concentration, reduces stress and anxiety. If you are 18 to 25 years old, you need between seven and nine hours of sleep each night.

7. Unplug

Switch off phones and social media for a short time each day. A change of scene is good for mental health. Go for a walk, sit, think, and breathe

DATA PROTECTION

The Engineering College will comply with the following data protection principles when processing personal information:

- we will process personal information lawfully, fairly and in a transparent manner;
- we will collect personal information for specified, explicit and legitimate purposes only, and will not process it in a way that is incompatible with those legitimate purposes;
- we will only process the personal information that is adequate, relevant and necessary for the relevant purposes;
- we will keep accurate and up to date personal information, and take reasonable steps to ensure that inaccurate personal information is deleted or corrected without delay;
- we will keep personal information for no longer than is necessary for the purposes for which the information is processed; and
- we will take appropriate technical and organisational measures to ensure that personal information is kept secure and protected against unauthorised or unlawful processing, and against accidental loss, destruction or damage.

Individual rights

You (in common with other data subjects) have the following rights in relation to your personal information:

- to be informed about how, why and on what basis that information is processed
- obtain confirmation that your information is being processed and to obtain access to it and certain other information, by making a subject access request
- to have data corrected if it is inaccurate or incomplete;
- to have data erased if it is no longer necessary for the purpose for which it was originally collected/processed, or if there are no overriding legitimate grounds for the processing (this is sometimes known as 'the right to be forgotten');
- to restrict the processing of personal information where the accuracy of the information is contested, or the processing is unlawful (but you do not want the data to be erased), or where the employer no longer needs the personal information but you require the data to establish, exercise or defend a legal claim; and
- to restrict the processing of personal information temporarily where you do not think it is accurate or where you have objected to the processing.

If you wish to exercise any of these rights, please contact the data protection officer Terry Weston - t.weston@theengineeringcollege.co.uk

EQUALITY AND DIVERSITY

The Engineering College aims to :

- Be open and available to all sections of the community and maintain a reputation as a provider whose activities all individuals, staff or students are encouraged to fully participate in.
- Be inclusive where individual differences are respected, where staff and learners are treated on their merits and where everyone has a fair opportunity to fulfil their potential.
- Be mindful of its legal responsibilities and therefore aims to eliminate discrimination harassment and victimisation by ensuring that Equality and Diversity principles are embedded into all provision, services and procedures.
- Advance equality of opportunity between people that share protected characteristics by removing or minimising disadvantages, making reasonable adjustments, responding to individual needs and by encouraging participation in public life.
- Foster good relations between people who share protected characteristics by consolidating effective partnerships with key stakeholders.
- Develop and report on specific and measurable equality objectives.

To meet this as a learner we expect you to:

- Ensure that you are aware of their responsibilities associated with legislation in this area.
- Adhere to the Engineering College code of conduct
- Not use discriminatory language and behaviour.
- Challenge discriminatory language and behaviour as not appropriate where it is observed amongst peers.
- Promote diversity in all learner engagement activities, to address diversity challenges across the engineering sector.

Some useful contacts and links

Mind

- Mental health problems
- Where to get help near you
- Treatment options
- Advocacy services

Infoline: [0300 123 3393](tel:03001233393)

Email: info@mind.org.uk

[We're Mind, the mental health charity | Mind](#)

Anxiety UK

[03444 775 774](tel:03444775774) (helpline)

[07537 416 905](tel:07537416905) (text)

anxietyuk.org.uk

Advice and support for people living with anxiety.

Beat

[0808 801 0677](tel:08088010677) (England)

[0808 801 0433](tel:08088010433) (Wales)

beateatingdisorders.org.uk

Offers information and advice on eating disorders, and runs a supportive online community. Also provides a directory of support services at [HelpFinder](#).

British Association for Counselling and Psychotherapy (BACP)

bacp.co.uk

Professional body for talking therapy and counselling. Provides information and a list of accredited therapists.

Campaign Against Living Miserably (CALM)

[0800 58 58 58](tel:0800585858)

thecalmzone.net

Provides listening services, information and support for anyone who needs to talk, including a web chat.

Carers UK

[0808 808 7777](tel:08088087777)

[029 2081 1370](tel:02920811370) (Carers Wales)

advice@carersuk.org

carersuk.org

Advice and support for anyone who provides care.

Disability Rights UK

disabilityrightsuk.org

Information and support for people living with a disability.

FRANK

[0300 123 6600](tel:03001236600)

talktofrank.com

Confidential advice and information about drugs, their effects and the law.

Adferiad

<https://adferiad.org/>

Information and support for people affected by mental health problems in Wales.

Hearing Voices Network

hearing-voices.org

Information and support for people who hear voices or have other unshared perceptions, including local support groups.

MindOut

mindout.org.uk

Mental health service run by and for LGBTQ+ people.

NHS UK

nhs.uk

Information about health problems and treatments, including details of local NHS services in England.

No Panic

[0300 7729844](https://03007729844)

nopanice.org.uk

Provides a helpline, step-by-step programmes, and support for people with anxiety disorders.

Papyrus HOPELINEUK

0300 102 2470

Text HOPE to 88247

pat@papyrus-uk.org

papyrus-uk.org

Confidential support for young people at risk of suicide and others who are concerned about them. HopeLine available 24/7.

Samaritans

[116 123](https://116123) (freephone)

samaritans.org

Samaritans are open 24/7 for anyone who needs to talk. You can [visit some Samaritans branches in person](#). Samaritans also have a Welsh Language Line on [0808 164 0123](https://08081640123) (7pm–11pm every day).

Sane

sane.org.uk

0300 304 7000 (open 4pm to 10pm daily)

Offers emotional support and information for anyone affected by mental health problems.

Student Minds

studentminds.org.uk

Mental health charity that supports students. Runs Student Space, offering online information and helplines that can support.

Time to Change

time-to-change.org.uk (England)

time-to-changewales.org.uk (Wales)

National campaign to end stigma and discrimination against people with mental health problems in England and Wales. The campaign for England ended in 2021, but its resources are still available online.

Turning Point

turning-point.co.uk

Health and social care services in England for people with a learning disability. Also supports

people with mental health problems, drug and alcohol abuse or unemployment.

Young Minds

[85258](https://www.85258.org.uk) (Crisis Messenger for young people – text the letters YM)

[youngminds.org.uk](https://www.youngminds.org.uk)

Committed to improving the mental health of babies, children and young people, including support for parents and carers.

Author:	Stephen Watts
Version:	1.0
Update:	14/08/2026
Approval:	
Review date:	31/08/2026