

## PROGRAMME SPECIFICATION

<b>Awarding body/institution</b>	Glyndŵr University
<b>Teaching institution</b> (if different from above)	Coleg Llandrillo Cymru (Grŵp Llandrillo)
<b>Details of accreditation by a professional, statutory or regulatory body</b> (including link to relevant website)	None
<b>What type of accreditation does this programme lead to?</b>	N/A
<b>Is accreditation in some way dependent on choices made by students?</b>	N/A
<b>Final award/s available</b> eg BSc/DipHe/CertHE	FdSc Certificate of Higher Education
<b>Award title</b>	Vehicle Performance Technology
<b>JACS 2 code</b>	H330
<b>UCAS code</b> (to be completed by admissions)	
<b>Relevant QAA subject benchmark statement/s</b>	Engineering (2010)
<b>Other external and internal reference points used to inform the programme outcomes</b>	Engineering Technician Standard from the Engineering Council's UK - SPEC
<b>Mode/s of study</b> <i>(p/t, f/t, distance learning)</i>	Part Time (2 years) and Modular basis
<b>Language of study</b>	English
<b>Date at which the programme specification was written or revised</b>	Updated September 2012
<b>Criteria for admission to the programme</b>	
<p><b>Entry Criteria</b></p> <p>Owing to the work related nature of the programme applicants are required to be in current and relevant employment (paid or unpaid) in the automotive industry. Additionally, they must have the support of their employer (or placement provider) to study the programme as the employer will be required to provide specific learning opportunities for the students in order for them to meet the programme requirements.</p>	

Additional, academic, requirements:

- a minimum of 120 UCAS tariff points, normally gaining a pass in at least one relevant A2 subject; or a BTEC National Certificate or above, or an AVCE, GNVQ, National Certificate/Diploma, International Baccalaureate, Welsh Baccalaureate, in a relevant subject; or a Pass in approved ACCESS; or NVQ level 3;
- GCSE Mathematics grade C or above, or equivalent;
- Equivalent international qualifications are acceptable;

Exemption from credit, eg direct entry onto Level 5, will be considered on an individual basis in line with Glyndŵr University's admissions and AP(E)L policies and procedures.

Those applicants who do not meet the above criteria will be considered on an individual basis and a wide range of prior experience may be taken into account. In such circumstances entry onto the programme will be subject to individual interview and vocationally related assessment to determine suitability.

English or Welsh language requirements:

- GCSE grade C, or higher or equivalent
- English fluency to TOEFL 525 or higher (with no element less than 500), or IELTS 5.5 or higher

### **Progression to Honours Degree**

Upon successful completion of the FdSc Vehicle Performance Technology students have the opportunity to top-up their qualification by means of a part time academic bridge of 30 credits followed by a two year part time BEng (Hons) Performance Car Technology as follows:

The bridging programme (30 credits) consists of:

- ENG550 Performance Car Structures and Materials
- ENG575 Analytical Techniques
- ENG548 Automotive Engineering Design

This 'academic bridge' will enable students to further develop critical thinking skills, supplement their knowledge of theoretical mathematics and science and provide additional higher level study of engineering design. Successful completion of aforementioned modules will enable graduates of the foundation degree programme to progress directly onto the final year of the BEng (Hons) Performance Car Technology programme at Glyndŵr University (120 credits).

For the first cohort of students (commencing March 2012 and due to complete in February 2014) the academic bridge will be undertaken at the end of their programme of study from February 2014 to May 2014. This will enable students to commence part time study of the BEng (Hons) programme at Glyndŵr University in September 2014. The bridging modules will be studied at Glyndŵr University, and must be completed successfully prior to a student joining the BEng programme.

For all subsequent cohorts (September starts), the bridging modules will need to be completed in the academic year following completion of the FdSc programme, allowing the students to progress onto the BEng programme 12 months after completing the FdSc. The bridging modules will be studied at Glyndŵr University, and must be completed successfully prior to a student joining the BEng programme.

## **Aims of the programme**

### **The Programme aims to:**

- develop the student's understanding of vehicle performance technology, through analysis of principles, concepts and familiarity with current and emerging technologies;
- provide a specialist programme of education for students that enhances their opportunities for employment in the sector specialising in vehicle performance technology operations;
- enable students to apply appropriate analytical and vocational skills in order to resolve problems and to develop innovative and reflective approaches;
- enable students to creatively apply the skills and knowledge attained from previous courses of study so that this programme contributes towards their career pathway and personal development;
- equip students with the knowledge and skills to prepare them for progression to honours degree.
- provide opportunities for continuous professional development to more experienced technicians through the provision of individual module study.

## **Distinctive features of the programme**

### **The distinctive features of the Programme aim to:**

- provide a vocational academic programme for learners who wish to pursue a career within the automotive industry specialising in vehicle performance technology;
- provide professional development and skills improvement for those already employed locally who seek promotion or greater responsibility as well as enhancing the local community's expertise and knowledge; and
- provide continuous professional development through the provision of individual modules within the scheme, offering learning and potential benefits to organisations as well as to individuals.

The Directorate of Technology at Coleg Llandrillo seeks to build upon the examples of good practice present in its current portfolio of courses, and the level of subject expertise of its teaching staff.

The college recognises that there is a need within the region for this foundation degree programme that will develop both knowledge and skills in general as well as vocational practice. It will also enable continuous professional development for individuals already employed in the sector who may wish to study specific modules for the purposes of individual career progression in the workplace.

The programme is designed to meet the specific needs of employers and aims to increase the knowledge and skills base of workshop employees.

The proposed foundation degree has been developed in line with the appropriate academic subject benchmark for Engineering and from the Engineering Council's UK - SPEC. In addition, strict adherence has been maintained to the guiding principles of foundation degrees

in that this proposed programme will feature pre and post validation:

- employer involvement in terms of programme design and review;
- accessibility by widening participation in to HE;
- articulation and progression onto honours degree at Glyndŵr University;
- flexibility in terms of delivery modes and study patterns including blended learning and use of technology; and
- partnership between HEIs, FEIs and SSCs, in this instance the Institute of the Motor Industry.

### **Support from Industry**

Stirling Wood, Head of Skills Development at the Institute of the Motor Industry, the SSC for Automotive Skills, in a letter dated 24 May 2011 indicates support for the development of the FdSc Vehicle Performance Technology as follows:

#### **Foundation Degree (FdSc) Vehicle Performance Technology**

Thank you for sending your proposal for the above Foundation Degree.

I asked two colleagues to review this proposal for i) National Occupational Standards link and ii) appropriateness of content.

Having now completed this review, we are content to provide our support. We give this on the understanding that the target audience for this qualification are individuals, either experienced or new entrants, who are working in the automotive retail sector within micro business or SMEs within Wales, who have traditionally not had access to vehicles manufactured and/or fitted with the latest technologies or who would have difficulty accessing the equipment needed to maintain and repair such vehicles and thus lack the knowledge and skills required.

The modular approach will allow the more experienced technicians to 'cherry-pick' the appropriate modules for their particular needs, and we support such an approach.

In this instance, this type of qualification would help skill and upskill this particular section of our sector.

We would welcome the opportunity to be kept up to date on the progress of this qualification and, indeed, the learners who enroll on it. This would probably be best focused through our Wales National Manager, Colin Williams, who I'm sure would be delighted to be kept informed.

### **Meeting Policy Agendas**

The programme meets several of the policy agendas of the Welsh Government's document on higher education 'For Our Future' (Nov. 2009), specifically the aim to work with employers, to develop foundation degrees, to develop part-time study opportunities, and to develop partnerships between HEIs and FEIs.

In addition, the sector skills council, employers and educational establishments all agree that the level of technical training provided in the motor vehicle industry is left wanting, the basic technical and engineering skills are adequately covered up to level 3 but the advancements in the field have left the employers with a work force showing a skills deficit in the more advanced areas of the industry. The FdSc Vehicle Performance Technology will enable technicians to increase their knowledge and skills in areas critical to the future success of their business. In short the programme aims to:

- fill the deficit in basic skills and essential skills displayed by many of the employees in the sector;
- increase the profile of the sector and enable an improvement in performance, image and prestige;
- provide employers with a highly skilled and motivated workforce.

Hence the programme offers learners:

- a programme which relates to sector policy agendas;
- the opportunity to submit assignments in either English or Welsh in line with Welsh Language Policy;
- the opportunity to study in a flexible way – the degree is taught over two evenings during the week.

## Programme structures and requirements, levels, modules, credits and awards

### Programme structure

	Level 4	Level 5
	<b>6 Modules</b>	<b>6 Modules</b>
<b>Modules</b>	Foundation Electrical Systems 20 Credits CORE	Advanced Electrical Technology 20 Credits CORE
	Foundation Vehicle Systems 20 Credits CORE	Advanced Vehicle Technology 20 Credits CORE
	Learning in Action 1: Applying Theory in Practice 20 Credits CORE	Engine Management Diagnostics 20 Credits CORE
	Research and Study Skills 20 Credits CORE	Engine Thermodynamics and Technology 20 Credits CORE
	Vehicle Engineering Principles 20 Credits CORE	Learning in Action 2: Research in Action at Work 20 Credits CORE
	Vehicle Performance Science and Mathematics 20 Credits CORE	Learning in Action 3: Personal Learning and Development 20 Credits CORE
<b>Credits</b>	<b>120 Credits at Level 4</b>	120 Credits at Level 4 + <b>120 Credits at Level 5 = 240</b>
	<b>Certificate of Higher Education in Vehicle Performance Technology</b>	<b>FdSc Vehicle Performance Technology</b>
<b>Awards</b>	<b>Exit Award only</b>	

### Programme delivery arrangements

	Academic Year		
	March 2012	September 2012	September 2013
	Learners enrol on:	Learners enrol on:	Learners enrol on:
<b>Level 4</b>	First cohort	Second cohort	Third cohort

	Academic Year		
	March 2013	September 2013	September 2014
	Learners enrol on:	Learners enrol on:	Learners enrol on:
<b>Level 5</b>	First cohort	Second cohort	Third cohort

## Intended learning outcomes of the programme

In 2010, the QAA published the revised subject benchmark statement for Engineering.

This foundation degree programme has been developed to address key issues identified in the QAA statement that articulates that:

FdSc Vehicle Performance Technology: upon completion of the award a student will:

- have realistic approaches to working practices and be able to undertake tasks that demonstrate knowledge and understanding of vehicle performance systems;
- be able to solve problems and overcome difficulties by employing their knowledge in a resourceful and flexible manner;
- be able to interpret data and use technology;
- be aware of cost and value and perform duties capably and professionally;
- be aware of international dimensions within vehicle engineering and commerce;
- be able to operate within appropriate codes of conduct;
- Understand the value of effective teamwork and communication and be able to work responsibly.

Cert HE in Vehicle Performance Technology: upon completion of the level a student will:

- understand the benefit of realistic approaches to working practices and be able to undertake tasks that demonstrate knowledge and understanding of vehicle performance;
- be able to overcome difficulties by employing their knowledge in a resourceful and flexible manner;
- be able to work with data and use technology;
- be aware of cost and value and perform duties capably;
- be aware of international dimensions within vehicle engineering;
- be able to operate within appropriate codes of conduct;
- Be aware of the value of effective teamwork and communication and be able to work responsibly.

The QAA benchmark statement for engineering (2010) indicates that:

*The UK-SPEC requirements have been framed to be potentially applicable to all types of engineering degrees, in the same way as the original subject benchmark statements. Like those, they offer a framework for the design and development of all engineering degree programmes, whether or not accreditation is sought for these.*

*They identify the subject matter of these programmes, and provide information to stakeholders about the content and standard of graduate output. For all these reasons, and because a single statement minimises the danger of conflicting interpretations, either in universities or in accrediting agencies, it is appropriate for the UK-SPEC output standards to serve also as the subject benchmark statement for engineering.*

Consequently, the UK-SPEC will be used to so that graduates of the foundation degree award will also be able to apply for Engineering Technician Standard status, which is identified as:

*Engineering Technicians are concerned with applying proven techniques and procedures to the solution of practical engineering problems. They carry supervisory or technical responsibility, and are competent to exercise creative aptitudes and skills within defined fields of technology. Professional Engineering Technicians contribute to the design, development, manufacture, commissioning, decommissioning, operation or*

*maintenance of products, equipment, processes or services. Professional Engineering Technicians are required to apply safe systems of working.*

These general aims will provide the foundation upon which this programme is built.

The intended learning outcomes of the programme have been grouped under the headings of:

- A. Knowledge and Understanding;
- B. Intellectual Skills;
- C. Subject Skills;
- D. Practical, Professional and Employability Skills.

For clarity, these programme learning outcomes have been differentiated by Level. Upon completion of each level, students will be able to:

### Knowledge and Understanding (A)

	Level 4	Level 5
A1: Techniques, Procedures and Methods	A1: Identify techniques, procedures and methods to undertake tasks	A1: Review and select appropriate techniques, procedures and methods to undertake tasks
A2: Knowledge of Principles	A2: Identify and explain scientific, technical or vehicle engineering principles.	A2: Use appropriate scientific, technical or vehicle engineering principles.
A3: Technical Understanding	A3: Describe and explain technical and other tasks	A3: Accept, allocate and supervise technical and other tasks

### Intellectual Skills (B)

	Level 4	Level 5
B1: Analysis	B1: Identify problems and potential diagnostic methods for a range of causes	B1: Identify and analyse problems and use diagnostic methods to recognise causes and achieve satisfactory solutions
B2: Assessment	B2: Identify, organise and use resources to complete tasks safely and efficiently	B2: Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety and environmental impact.
B3: Problem Solving	B3: Apply given tools/methods to a well defined problem and begins to appreciate the complexity of the issues.	B3: Recognise key elements of problems and choose appropriate methods for their resolution in a considered manner.

### Subject Skills (C)

	Level 4	Level 5
C1: Compliance	C1: Comply with the Code of Conduct of their Licensed Institution or Professional Affiliate	C1: Comply and promote the Code of Conduct of their Licensed Institution or Professional Affiliate
C2: Work Safety	C2: Apply safe systems of work	C2: Manage and apply safe systems of work
C3: Work Sustainably	C3: Undertake vehicle engineering work with consideration to sustainability	C3: Undertake vehicle engineering work in a way that contributes to sustainable development

### Practical, Professional and Employability Skills (D)

	Level 4	Level 5
D1: Research & Study Skills	D1: Identify basic information and suitable sources, carry out searches and bring information together in a way that ensures work is accurate, clear and properly saved.	D1: Plan how to obtain and use required information for the purpose of an activity and use appropriate structures and procedures to explore and develop information.
D2: Communication	D2: Use oral, written and electronic methods for the communication of technical and other information	D2: Use oral, written and electronic methods for the effective communication of technical and other information
D3: Working with Others	D3: Work with colleagues, clients, suppliers and the public	D3: Work effectively with colleagues, clients, suppliers and the public
D4: Employability	D4: Work reliably without close supervision accepting responsibility for tasks undertaken	D4: Work reliably and effectively without supervision accepting responsibility for tasks undertaken
D5: Information Technology	D5: Operate and communicate using IT in a format appropriate to the discipline.	D5: Operate and communicate effectively using IT in formats appropriate to the discipline.
D6: Professionalism	D6: Use CPD to maintain competence in current practice.	D6: Make effective use of CPD to ensure ongoing competence at the level of future intended practice.

**CURRICULUM MATRIX** demonstrating how the overall programme outcomes are achieved and where skills are developed and assessed within individual modules.

- A: Knowledge and understanding;
- B: Intellectual skills;
- C: Subject skills;
- D: Practical, professional and employability skills

Level 4 Certificate of HE	Module Title	Core/Option	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	D4	D5	D6
	Foundation Electrical Systems	C	✓	✓	✓		✓				✓	✓			✓	✓	✓
	Foundation Vehicle Systems	C	✓	✓	✓		✓				✓	✓			✓	✓	✓
	Learning in Action 1: Applying Theory in Practice	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Research and Study Skills	C				✓	✓	✓				✓	✓	✓	✓	✓	✓
	Vehicle Engineering Principles	C	✓	✓	✓		✓				✓	✓			✓	✓	✓
	Vehicle Performance Science and Mathematics	C	✓	✓	✓		✓				✓	✓			✓	✓	✓

Level 5 Foundation Degree	Module Title	Core/Option	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	D4	D5	D6
	Advanced Electrical Technology	C	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓
	Advanced Vehicle Technology	C	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓
	Engine Management Diagnostics	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	Engine Thermodynamics and Technology	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	Learning in Action 2: Research in Action at Work	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Learning in Action 3: Personal Learning and Development	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## **Learning and teaching strategy used to enable outcomes to be achieved and demonstrated**

**Lectures** are a very effective way of delivering core material and establishing a framework for a module against which other material can be set. Students will be made aware of the content of each module and issued with a list of the topics to be covered as well as sources of additional material (required and recommended reading) via the module handbook. All members of staff within the College, most of whom have professional teaching qualifications, make an effort to present lecture material in an effective and stimulating manner. To facilitate this, most staff use overhead projectors, and/or projection equipment. Visiting speakers from industry are invited to participate in teaching and make a contribution to assessment through feedback channelled via the module leader.

**Workshops** and practical work are utilised to complement lectures enabling learners to participate in activities that reinforce theory and develop understanding and skills. The resources available to learners at the Centre for Automotive Technology at the Rhyl Campus are equipped to the latest industry standards and include Heavy Goods Vehicle Brake Tester, 4 Wheel Drive Rolling Road Dynamometer, 4-Wheel Alignment, a superb Auto-Electronics Diagnostic Room, USI Spray Booths, Lechler Mixing Scheme, Car-OLiner Body Jig and Alignment System, Welding Bays, Valeting Bay, plus Hybrid Technology and Vehicle Climate Control Systems.

**Tutorials** are meetings with a student or group of students facilitated by a lecturer or lecturers and are used in three ways within the programme:

- To expand upon and consolidate material covered in lectures through an enquiry-driven problem solving approach.
- As an opportunity to discuss and develop subject material.
- To undertake remedial work to overcome any deficiencies in a student's background knowledge.

**Employment based modules:** The programme aims to provide both academic progression and continuous professional development for individuals employed in the automotive sector. Within the foundation degree programme three modules make up the vocational practice or work-based element that take place at work. It is a requirement of the programme to keep a record of hours to monitor relevant work undertaken in the establishment relating to the course subject area.

The three vocational modules are named Learning in Action and require students to reflect on their practice and make links between theoretical based modules and vocational modules. Students will be required to produce an individual portfolio to include a range of evidence relating to their professional and personal development, and individual written assignments which will require them to reflect and evaluate their own and others professional practice in relation to values and principles which underpin 'good practice'. The vocational elements of the course are an integral part of the whole programme of study and will consider the values and principles which underpin good practice in the sector.

**Managing the work-based element of the programme:** For the majority of students the placement provider is their employer. In exceptional circumstances, a student may use the industry-standard facilities of the College for the first Learning in Action module (Level 4) only. In all circumstances the expectations in terms of satisfying the work-based learning requirement will be the same.

At Level 5 all students will be expected to undertake the Learning in Action modules at a place of work, either paid or unpaid. For students not in paid employment the College will negotiate

with employers for a suitable placement that will enable the learner to satisfy the requirements of the work-based modules.

The arrangements for the student's placement will be established during the initial delivery phase of the programme. The objectives of the work to be undertaken by the student will be discussed and agreed with the employer (or work placement provider), the student and the module leader to ensure that the work to be undertaken by the student is both of value to the employer and meets the requirements of the module learning outcomes. Hence the module leader will arrange a meeting with the employer and the student to discuss and agree the following which will be monitored on a regular basis throughout the period of the student's placement:

- How the Learning in Action module/s operate
- How the placement provider will ensure that the student will have access to a working environment that enables him/her to confirm knowledge, develop skills and demonstrate competence to achieve the module learning outcomes
- How the student will evidence appropriate work
- The role and responsibility of the module leader in supporting the student and liaising with the employer
- The role and responsibility of the employer in supporting the student at work
- The role and responsibility of the student in terms of achieving academic objectives and conducting themselves professionally at work

**During placement** the module leader will maintain contact with the student and the employer on an ongoing basis according to the individual requirements of both either in person, by telephone or by e-mail. Irrespective of the amount of informal contact already made during the placement at least one formal meeting will be arranged to enable the module leader to discuss the student's progress with the employer and student both on an individual and joint basis. Items for discussion at these meetings will include, but not be limited to:

- Student's progress towards previously identified objectives
- Any additional support needs of the employer or student
- Student's ability to apply new knowledge and skills
- Actual benefit to the student and employer of the application of new knowledge and skills
- Application of practical, professional and employability skills demonstrated by the student
- Student and employer module-related documentation

**Upon completion of placement** the module leader will undertake a formal review of the placement with the student making use of the employer feedback material. This formal review will discuss, but not be restricted to:

- Success in terms of meeting identified objectives
- Enabling or limiting factors affecting achievement of objectives
- Ability to apply new learning and skills at work
- Ability to apply practical, professional and employability skills
- Individual reflection leading to identification and definition of academic and vocational progress

### **Specific aims of each of the work-based modules**

**Learning in Action 1: Applying Theory in Practice** requires students to apply their learning, in the form of new knowledge and skills, from the specialist technical modules at Level 4 notably:

- Foundation Electrical Systems
- Foundation Vehicle Systems

In addition, students will be required to identify how their new knowledge and skills has enhanced their performance at work with reference to specific examples of vehicle performance technology-related problem solving, work and task completion. A record of this will be evidenced in the student's portfolio with reference to the Work-based Hours Record document contained within this booklet.

**Learning in Action 2: Research in Action at Work** builds upon the previous Learning in Action module by continuing with the theme of applying new knowledge and skills at work. However, the focus of this module is broader in terms of documenting how tasks can be researched, impact upon a range of employability skills and make use of industry-specific documents and formats. The specific direction of the applied research will be agreed following discussion by the module leader, employer and the student.

**Learning in Action 3: Personal Learning and Development** Builds upon the two previous Learning in Action modules and culminates in the production of a comprehensive personal enhancement plan that identifies, within the context of the workplace, an employees' industry-specific and academic development needs. The study will be based upon:

- Testing theories in work-based contexts
- Analysis of performance at work
- Reflecting a reviewing how a business operates in an evolving technical sector

This study has real benefits for both the employee and the employer. For the student it is a position statement that will identify the distance travelled from the start of their programme of study and the learning journey still potentially to be made. For the employer, it will provide tangible evidence of the organisational benefits resulting from the investment made in staff training and provide a snapshot of the business operation within a wider industry context.

**Guest speakers** will be used throughout the programme. They enhance delivery by offering another sense of the outside or real world into the learning and teaching process. Their input provides valuable insights into current working practices in different areas of expertise and experience and gives the students insight into various career opportunities within the wider automotive industry.

**MOODLE** is an important medium for supporting learning and teaching. Essentially, using this facility enables students to complement their lecturer/tutorial learning with on-line information and participative learning tools. MOODLE is used extensively on all HE courses as both a learning resource and means of communication with students and its continued use will underpin this development.

**Learning Strategy:** Students are expected to take greater responsibility for their own learning as they progress through their programme. The programme structure and the teaching strategies are designed to encourage this development. The student-centred approach is encouraged through the use of case studies, projects and practical exercises supplemented by the use of appropriate support materials such as DVDs, computer software and MOODLE and relevant site visits. Many of the learning strategies used employ active engagement with subject material to enhance learning.

### **Welsh medium provision**

Whilst the programme will be delivered in English, students are entitled to submit assessments in Welsh, and dependent on resources, bilingual delivery may be provided.

## **Assessment strategy used to enable outcomes to be achieved and demonstrated**

### **Assessment Schedule**

Students will be assessed in accordance with the assessment schedule identified for the Programme. The staff and students at Coleg Llandrillo will comply fully with Glyndŵr University's Assessment Strategy, which aims to provide a framework for the assessment of students' competence, knowledge and understanding, and the grading of students for progression and the conferring of Awards. Overall responsibility for student progression and academic quality lies with the Assessment Boards at the University. The University Assessment Boards will be responsible for academic quality assurance, the confirmation of marks and degree classification to both teaching staff and students, and the overseeing of assessment procedures.

The Programme Leader and Programme Team will attend Pre-Module, Module, Pre-Assessment and Assessment Boards at the University as required. Coleg Llandrillo will also use the services of the External Examiner appointed by the University for the Programme. The Programme Leader and the Programme Team will follow the Regulations on Academic Misconduct, Student Complaints, and the Student Appeals' Procedures established by Glyndŵr University. Rules and regulations for assessment and procedures for calculating the final award are detailed in the Glyndŵr University Regulations. Assessment results will be collated by Coleg Llandrillo's Programme Leader and communicated to the Academic Link and Student Data Services at Glyndŵr University.

Assessments relate directly to learning outcomes and one assessment tends to cover more than one learning outcome. In designing and deciding upon an assessment format for a module the following factors have been considered:

- Module learning outcomes and their level, with particular emphasis on the student's ability to analyse and communicate information from module content, learned knowledge from other areas/qualifications, experience and the implementation of systematic information-seeking strategies
- Encouraging students to apply their skills to specific problems.
- Approaching problems in a systematic way and employing test approaches to resolve them.
- Assessment performance criteria, as communicated to the student.
- Validity and reliability of the assessment methods, which are monitored by module leaders and programme teams.
- Time constraints (for students and staff) and the need to ensure consistency.
- Use of a range of strategies through which a student can demonstrate what he or she knows.
- The nature of the programme, which is based around a portfolio of evidence, develops competence in a range of practical and academic tasks in a way that lends itself to continuous formative assessment opportunities.
- Ongoing work on a range of practical and academic tasks enables staff to give feedback to students using a range of formative assessment methods and creates opportunities for them to evaluate the effectiveness of their own teaching.
- That the use of a range of formative assessment strategies to evaluate the progress of the learner on the programme will not lead to coaching the student into achieving higher grades.

## Methods of Assessment

### Indicative Assessment of Level 4: Certificate of Higher Education Vehicle Performance Technology

	Module Title	Assessment Method	Credits
Level 4 Certificate of HE	Foundation Electrical Systems	Assessment 1: Written Assignment Assessment 2: Project Portfolio	20
	Foundation Vehicle Systems	Assessment 1: Individual Portfolio	20
	Learning in Action 1: Applying Theory in Practice	Assessment 1: Individual Portfolio of Exercises	20
	Research and Study Skills	Assessment 1: Individual Portfolio of Exercises	20
	Vehicle Engineering Principles	Assessment 1: Individual Project	20
	Vehicle Performance Science and Mathematics	Assessment 1: Individual Portfolio	20

### Indicative Assessment of Level 5: FdSc Vehicle Performance Technology

	Module Title	Assessment Method	Credits
Level 5 Foundation Degree	Advanced Electrical Technology	Assessment 1: Individual Portfolio	20
	Advanced Vehicle Technology	Assessment 1: Individual Portfolio	20
	Engine Management Diagnostics	Assessment 1: Individual Portfolio	20
	Engine Thermodynamics and Technology	Assessment 1: Individual Written Project	20
	Learning in Action 2: Research in Action at Work	Assessment 1: Individual Study	20
	Learning in Action 3: Personal Learning and Development	Assessment 1: Personal Development Plan Assessment 2: Reflective Essay	20

Within each individual portfolio, project and study, students will undertake a wide range of activities and exercises to demonstrate the achievement of learning outcomes.

### Internal Second Marking

Glyndŵr University's regulations for internal second marking will be adhered to.

### Indicative Timing of Assessment for Level 4 and Level 5 Modules

The following table (overleaf) shows the Indicative Timing of Assessments for the Programme. Although the final deadline for the production of assessment material is grouped at the end of each module, the production of work relating to each of the assessments is progressive throughout the delivery of the programme. This approach will minimise the pressure placed upon students to produce work as module leaders will monitor production of the individual elements of each assessment.



## Assessment regulations that apply to the programme

Glyndŵr University Regulations for Bachelor Degrees, Diplomas and Certificates and Foundation Degrees and will apply to this Programme.

## Programme Management

**Academic Link:** Olivier Durieux (Glyndŵr University)

**Head of Programme Automotive Engineering:** Graham Taylor (Coleg Llandrillo Rhyl)

**Programme Leader FdSc Vehicle Performance Technology:** Richard Brammer (Coleg Llandrillo Rhyl)

**Programme Team:** Graham Taylor, Richard Brammer, Dave Edwards, Stuart Frost, David Kirkby, Dan Montoro and Garry Roberts.

A team of permanent, full-time academic staff, together with experienced members of the directorate's part-time academic staff, will undertake delivery of the programme.

The Academic Link at Glyndŵr University will take responsibility for overseeing the collaborative arrangements and ensuring the quality of the course provision. The Head of Programme Automotive Engineering (Graham Taylor), the Programme Leader (Richard Brammer), the Programme Team and the students at Coleg Llandrillo Rhyl will meet with the Academic Link at Glyndŵr University (Olivier Durieux) on a regular basis as follows:

Before commencement of delivery:

*Purpose: to introduce and update Coleg Llandrillo staff with Glyndŵr University academic rules and regulations and to discuss preparation for induction and delivering HE.*

*Frequency: minimum of two meetings*

During induction:

*Purpose: to introduce the students to Glyndŵr University and CLR, the campuses, services and staff. To offer a networking opportunity for CLR and GU staff with a view to identifying potential support sources for CLC staff.*

*Frequency: one at Coleg Llandrillo Rhyl and one at Glyndŵr University*

- During programme delivery:

*Purpose: to provide ongoing support, advice and assistance with regard to delivery of academic modules and the integration of theory with practice, to enable discussions regarding the curriculum and learning, teaching and assessment strategies (including marking practices), issues surrounding student progression and support, areas for staff development and programme enhancement.*

*Frequency: a minimum of one per month for the first year. This will be reviewed by the Academic Link and the delivery team after year 1.*

- Pre-issue of assessment

*Purpose: to ensure that the assessments are compatible with the rigour and coverage of learning outcomes articulated within each module as stated within the validation document.*

*Frequency: as required within programme delivery meetings*

- Internal moderation of assessment:

*Purpose: to oversee the process of moderating assessment ensuring that it operates according to Glyndŵr University academic rules and regulations.*

*Frequency: as required*

- Prior to module and exam boards

*Purpose: to assist the programme team in preparing for external examination and the module and progression/award boards.*

*Frequency: prior to board seasons*

- Programme and modules review

*Purpose: to assist the programme team with Glyndŵr University module and programme review procedures and to ensure that the student voice is heard and recognised within such reviews.*

*Frequency: bi-annually (and in line with Glyndŵr University's annual monitoring exercise schedule)*

The Academic Link (AL) will be responsible for ensuring that Glyndŵr University's academic rules and regulations are adhered to and for monitoring the quality of the student experience. It is anticipated that the AL will visit the Rhyl College at least on a monthly basis during the first delivery year of the programme to support the management and delivery of the foundation degree. In addition, the AL will be available by telephone or e-mail to provide support outside of scheduled meetings. The frequency of visits will be reviewed at the end of the first year to determine future need.

It will be the responsibility of the Programme Leader (Richard Brammer) to ensure that:

- statistics for enrolment, successful completions, retention and progression are maintained;
- assessment grades are submitted to the Student Programme Centre at Glyndŵr University for onward submission to the Assessment Board;
- action is taken on recommendation contained in External Examiner reports;
- an Annual Monitoring Report (ACCR) is completed and sent to Glyndŵr University academic office;
- programme delivery is monitored and evaluated in accordance with Glyndŵr University procedures.

The modules will be delivered by the named Module Leader, as shown by the following table. The Programme Team has also identified a Secondary Tutor for each module who would be able to provide classroom cover in the event of absence and would be called upon to provide second marking assessment of learners' work.

## Programme Modules by Module Leader and Secondary Tutor

Level 4 Modules	Module Title	Module Leader	Secondary Tutor
	Foundation Electrical Systems	Garry Roberts	Dan Montoro
	Foundation Vehicle Systems	Dave Edwards	Graham Taylor
	Learning in Action 1: Applying Theory in Practice	David Kirkby	Richard Brammer
	Research and Study Skills	Stuart Frost	Graham Taylor
	Vehicle Engineering Principles	Graham Taylor	Dave Edwards
	Vehicle Performance Science and Mathematics	Stuart Frost	Graham Taylor

Level 5 Modules	Module Title	Module Leader	Secondary Tutor
	Advanced Electrical Technology	Garry Roberts	Dan Montoro
	Advanced Vehicle Technology	Dave Edwards	Graham Taylor
	Engine Management Diagnostics	Garry Roberts	Dave Edwards
	Engine Thermodynamics and Technology	Stuart Frost	Dan Montoro
	Learning in Action 2: Research in Action at Work	Richard Brammer	David Kirkby
	Learning in Action 3: Personal Learning and Development	David Kirkby	Richard Brammer

## Quality Management

Coleg Llandrillo has developed rigorous processes for quality control and continuous improvement and the College's quality profile continues to be the best in Wales as far as FE Colleges are concerned, and one of the best in the UK. Over 80% of the grades for both programme and generic elements awarded by Estyn in 2005 achieved grade ones, which is an unparalleled achievement for a large FE college. In the last three Estyn inspections, Coleg Llandrillo has been rated as a grade one for quality management.

The College has established an excellent reputation for quality management with its existing HE partners. In June 2008, the QAA Developmental Review (for Wales) recognised that the college's overall academic standards and the management of quality have been extended with facility to the higher education curriculum. In the report, the QAA identified four areas of best practice:

- "the college's processes for academic development, which embed strategic considerations and stakeholder engagement within a highly-developed mechanism for new programme approval";
- "the mechanisms established by the college both to raise the aspirations of learners to move on to higher education courses and to facilitate this progression";
- "the structures which the college has established to ensure engagement across academic areas and to enable staff at all levels to share experience and to reflect upon the delivery of higher education programmes";
- "the opportunities afforded to staff to engage in a range of tailored staff development, both internally focused and focused upon the needs of individual partners".

The Vice Principal for Planning and Standards takes overall responsibility for academic

leadership and quality control through a Director of Quality and Curriculum, a Quality Enhancement Officer, a Higher Education Manager, a Higher Education Development & Validation Manager, a University of Wales Academic Leader and four HE Curriculum Development Officers, who all provide extensive support and guidance to staff within Programme Areas, in terms of quality and planning. The Academic/Creative Directorate Higher Education Curriculum Development Officer further supports the development of the curriculum in this area and ensures continuous quality improvement.

The Curriculum Area Director for Technology has responsibility for academic leadership, management and quality control. The Directorate is divided into Programme Areas and the FdSc Vehicle Performance Technology is included in the Automotive Engineering Programme Area. This Area is managed by a Head of Programme. In turn, the course is managed by a Programme Leader who takes responsibility for planning and quality at course level.

Each programme area in the college is also supported by a Quality Advisor, who provides advice and mentoring to course teams on the implementation of the quality procedures. The QA role also requires the sharing of good practice across the area and through cross college activities.

The quality procedures are rigorous and apply to all areas of the college, including all functional areas.

For curriculum areas, the quality procedures are based upon the following activities:

- Setting targets for key performance indicators (recruitment, student opinion, attendance, retention and attainment).
- Monitoring targets through gathering evidence of performance. This includes:
  - measuring attendance levels by course/class
  - measuring retention and attainment against benchmarks and over time
- Monitoring student perceptions of the programme (the “Learner Voice”) . This includes:
  - an anonymous student survey (externally administered) and benchmarked against similar UK institutions delivering HE in FE
  - module/subject evaluations
  - holding staff/student consultative meetings
  - conducting HE Learner Panels (attended by Student representatives) chaired by a Curriculum Director ( Coleg Llandrillo)
  - conducting a cross college HE Focus group (attended by student representatives) chaired by the HE Manager (Coleg Llandrillo)
- Regular team meetings to discuss issues, share good practice and create action plans for improvements
- Annual classroom observations of teaching staff by managers
- Systematic monitoring of standards through internal verification and cross moderation, using college/partner HEI procedures
- Annual self assessment and action planning at course team, programme area and directorate levels
- Programme Leaders producing an Annual Monitoring and Evaluation Report (AMER, or equivalent) for HEI partners
- An annual report on the quality of Higher Education across the College submitted to

the HE Quality and Academic Standards Committee

- Annual curriculum reviews analysing current and future provision, based upon market information and performance within each programme, based upon the key performance indicators.

Student representatives drawn from each academic level are elected at the start of each year of the programme and attend meetings as indicated above. Feedback, comment and queries from learners are obtained formally through regular discussion at student quality meetings, and informally through discussion related to specific issues as and when they arise.

Issues which are raised by student representatives are forwarded to the Programme Board at which decisions/actions are addressed formally and recorded in the minutes for action as appropriate.

### **Research and Scholarly Activity**

#### **Academic and/or Professional Expertise**

The College has an established Higher Education Staff Recruitment and Development Strategy in place with the stated aims of ensuring:

- all staff who teach on HE programmes are suitably academically and vocationally qualified;
- a commitment to teaching excellence;
- all staff have recent, relevant industrial/commercial experience to ensure they are up to date with modern employment needs;
- all staff have appropriate research opportunities and to record these on their HE CVs together with their continuous professional development records;
- all staff have appropriate teaching loads which enable them to deliver high quality teaching and learning.

The college supports these stated aims by:

- providing financial support for degree and post-graduate studies via the Degree and Post-graduate support application policy contained within the Staff Development Policy;
- ensuring that all staff who teach on HE courses are appropriately qualified and are engaged in appropriate research and continuous professional development activities by carrying out Recognised Teacher Status screening via the Vice Principal – Staff/Student Operations and the HE Manager;
- providing in-house support for staff engaged in degree and post-graduate studies via the Llandrillo Research Group operated by the Library Resource Manager, Dr Andrew Eynon;
- organising an internal annual HE conference for all staff involved in HE provision, making use of specialist, leading-edge external speakers as appropriate;
- ensuring that staff undertake relevant commercial and/or industrial updating to ensure they are aware of the needs of employers;
- providing course development time for staff engaged on new courses/modules;
- giving a higher weighting to HE teaching hours to reflect the research and planning required to deliver;
- arranging exchange visits for staff with partner HEIs to share good practice;
- providing a programme of in-house HE related staff development to ensure all staff remain at the leading edge of developments and share good practice, using specialist

input where appropriate;

- providing funding for staff engaged on HE courses to attend external staff development events as appropriate and identified via the appraisal or course self-assessment process.

### **Engagement with Subject Discipline**

Coleg Llandrillo supports staff in the continuing development of their professional practice, and staff engage in internal and external staff development events. The need for particular support is identified in the annual course review and in annual individual staff Appraisals/Performance Reviews.

Activities include the review of methodologies for supporting student learning, assessment strategies and providing effective feedback to learners. Furthermore, the college actively supports the development of learning technologies through an ongoing programme of staff development led by the designated Learning Technology team. This has led to an extensive range of resources being created for the college VLE (Moodle). There is extensive provision and use of learning technologies in the classroom e.g. electronic whiteboards and video conferencing.

Many staff are members of subject associations or professional bodies and hold professional qualifications (in addition to their academic qualifications).

### **Knowledge and Understanding**

Each year, staff are asked to update their HE CV, online via the Coleg Llandrillo Information Centre (CLIC). This online CV includes sections relating to Professional Experience in Education, Industrial & Commercial Experience, Additional Professional, Scholarly Activities and Memberships. An analysis of this information indicates that most HE staff engage in a range of scholarly activities related to the specific requirements of their course.

HE staff at Coleg Llandrillo have access to structured opportunities to maintain their knowledge of current developments in their subject area through both internal and external staff development events

Scholarly activities, engaged in by staff, include continuous reading to maintaining currency of subject/pedagogic knowledge, wider reading to expand subject, or pedagogic knowledge e.g. for the development of a new topic /module or to produce a reading list for a new module.

Best practice in professional activity is maintained through observing other professionals, professional networking, attending professional meetings, training events and conferences. In addition, staff are encouraged to attend the Improving Practice and Research Group.

### **Improving Practice through Scholarship Group**

The group's primary function is to promote an ethos of scholarship within the College and is a sub-committee of the Curriculum & Academic Standards Committee. The group's remit is to encourage staff to engage in scholarly activities through raising awareness of what scholarly activity entails i.e. professional development, industrial/commercial experience etc. The group also promotes good practice across the learning network in the areas of pedagogy, subject content, professional skills, course development and research in its widest context. It enables staff to overcome the barriers to engagement in scholarly activities.

This will lead to the creation of a repository of scholarly activity outputs (e.g. publications, teaching materials, delivering staff development, teaching practice, poster presentations, conference papers and input at staff meetings). To further promote a research ethos, the

College will produce an online publication - which will be open to external contributions (e.g. FEIs, HEIs) - and showcase best practice within the institution at the annual HE conference.

Staff are encouraged and supported to attend external events to maintain the currency of their knowledge related to their discipline and their professional development in pedagogy. The college provides an annual HE Conference which focuses on a wide range of key issues related to the development of professional expertise at HE level. The college has also hosted events run by external agencies including the HE Academy and JISC. Staff are also encouraged to attend internal staff development events which are run by suitably qualified staff. Attendance at any staff development event is recorded on the HE CV.

The college VLE (Moodle) also provides staff with information directly related to the effective delivery of their programme, and the Academic Toolkit unit provides pedagogic support. This resource is updated to reflect emerging trends in the delivery of HE within an FE institution.

### **Particular support for learning**

#### **Academic Personal Tutor Support**

At each level, the student cohort group will be assigned a tutor who will act as a personal tutor to each member of that group - this will be a member of the teaching staff with appropriate academic experience and knowledge of the programme. This personal tutor will advise on academic matters as well as aspects of personal welfare.

Students are able to contact personal tutors to arrange mutually convenient individual appointments to discuss their general progress. In addition, students are seen on a formal group basis. Student contacts are recorded and kept in the students' file. Students also have access to full-time professional counsellors and the staff in Advice and Guidance at Coleg Llandrillo.

All students will receive an induction programme at Coleg Llandrillo, held in the week prior to the commencement of teaching. During this induction, students will be introduced to the various facilities available to them and, in order to ensure that students are confident to approach the task of studying at a higher education level. Students on the Programme will also attend an induction at Glyndŵr University (Wrexham Campus), which will include induction to the Library and resource facilities available to learners of the university.

Students will be given numerous opportunities to "get-to-know each other" at induction and throughout their studies and programme social events.

All students will be given a Programme Handbook which will provide information that is specific to the programme, including the structure of the awards, module content, methods of assessment, assessment schedule and requirements for placement and workplace learning. This will also contain information on the teaching team and a list of key dates and assignment deadlines.

#### **Learner Experience**

Coleg Llandrillo will ensure that all students on the FdSc Vehicle Performance Technology receive a learning experience that is comparable to that received at Glyndŵr University, by offering the following:

- enabling the students to attend Glyndŵr University's Induction Programme at the Wrexham Campus;
- providing full access to Glyndŵr University's resources;

- providing full access to the University's Procedures, including Academic Appeals;
- arranging visits from Glyndŵr University's staff to contribute to the programme.

### **Support for Learning :**

**Advice and Guidance:** The Student Services Team in the Advice & Guidance Centre is available to provide impartial information about study and careers options to help learners make the right choices. Coleg Llandrillo has a dedicated Higher Education Adviser. Staff are also available to speak to learners about careers, compiling CVs and improving interview skills/techniques etc.

**Careers Service:** Coleg Llandrillo operates a careers and advisory service, and has close links with the GoWales Team at Glyndŵr University.

**Child Care:** Coleg Llandrillo has a Childcare Centre for children aged four months to four years. If there is no space available, the college can help HE students to find a registered childcare provider. There may also be funds available to help towards the cost of childcare.

**Financial Advice:** Advisers are available to help students access the latest information on financial matters, including bursaries, grants and student loans.

**IT Facilities:** The College's libraries, IT workshops and many of the teaching rooms provide access to IT facilities. These include the latest technology and software, including Moodle and learners are provided with an email account with full internet access. Students are able to access the internet via Wi-Fi in designated areas of the college. Moodle is an important medium for adding value to learning and teaching. Essentially, using this facility enables students to complement their lecturer/tutorial learning with on-line information and participative learning tools. Moodle is used extensively on all HE courses as both a learning resource and as a means of communication with students. Its continued use will underpin this proposed degree programme.

**Library:** The Library Information Centre received a Grade One (Gold Award) from the Council for Learning Resources in Colleges in May 2005, the first FE College in Wales to achieve this accolade.

The college is a member of Linc y Gogledd, a partnership with Glyndŵr and Bangor Universities and the Public Library Services of Gwynedd, Ynys Mon, Flintshire, Denbighshire and Conwy. This partnership gives students access to additional resources including the University of Wales catalogue and resources in the public libraries and other local FE colleges. The library also provides access to a wide range of electronic resources including e-books and e-journals which can be accessed off campus.

The incorporation of the IT Workshop into the library building has enabled greater integration of facilities, and the facility hosts the video conferencing suite for staff and students.

Library facilities are available at all the college's sites, providing access to an extensive stock of books and journals. Coleg Llandrillo library resources can be accessed remotely online and access to external resources is also arranged for specific courses.

**Student Welfare:** The institution's Student Welfare Co-ordinators provide confidential advice on a range of personal issues, from finding accommodation to counselling services.

**Study Skills:** The College's Learning Support staff can provide help with English, Maths and Study Skills if learners require help. In addition to the services offered at Coleg Llandrillo, students are also entitled to access the full range of student services available at Glyndŵr

University, including:

- Student Funding and Welfare
- Counselling and Wellbeing
- DisAbility Team
- Assessment Centre
- Irlen Centre
- Library and Study Facilities

## **Equality and Diversity**

The College recognises the value of each member of its community, the contribution to the enrichment of College life made by students, staff, clients and governors and the equality of such a contribution.

Coleg Llandrillo is committed to offering an education service which provides equality of opportunity to all and freedom from discrimination on grounds of gender, language, race, religious beliefs, ethnicity, age, HIV Aids, disability, social class or sexual orientation. Coleg Llandrillo also acknowledges the need to protect freedom of speech, within the law.

This Policy is intended to actively combat discrimination, raise awareness and provide guidelines for students, staff, governors, employers and other stakeholders. It seeks to promote social inclusion, encourage widening participation and ensure equality of opportunity within a bilingual context as detailed in the College's Welsh Language Scheme.

This Policy is subject to review on a biennial basis and has been written within the legal framework of:

The Sex Discrimination Act (1975)	The Race Relations Act (1976)
The Race Relations Amendment Act (2000)	The Employment Equality (SO) Reg 2003
The Disability Discrimination Act (1995)	The Sex (Gender Re-designation) Reg. 99
The Welsh Language Act (1993)	Employment Equality (Religious Belief) Regs 2003
The Human Rights Act (1998)	Age Discrimination Regulations (October 2006)

### **Students with Additional Learning Needs and/or Disabilities**

Coleg Llandrillo welcomes students with disabilities and specific needs and is committed to improving facilities and providing individual support for learning to all students within its widening participation programme.

The College aims to provide equality of opportunity for all our students and aims to provide the resources required by students with specific needs.