

## PROGRAMME SPECIFICATION

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### Award titles

Programme Title(s)

Tystysgrif Genedlaethol Uwch Technoleg Drydanol ac Electronig  
HNC Electrical & Electronic Technology

Tystysgrif Genedlaethol Uwch Technoleg Fecanyddol  
HNC Mechanical Technology

Internal Programme Title(s) (if different to the title on the certificate)

Programme to be included in Graduation Ceremonies

(Please indicate by deleting yes or no)

Yes

### Delivery period

5 years

### Intake points

One intake point in September

### Regulatory details

|   |
|---|
| <b>Regulatory details</b>   |
| <b>Awarding body</b>  |
| Glyndŵr University  |
| <b>Programme delivered by</b>   |
| Coleg Cambria   |
| <b>Location of delivery</b>   |
| Coleg Cambria – Deeside Campus  |
| <b>Faculty/Department</b>   |
| Faculty of Arts, Science and Technology   |
| <b>Exit awards available</b>  |
| Higher National Certificate Electrical & Electronic Technology<br>Higher National Certificate Mechanical Technology               |
| <b>Professional, Statutory or Regulatory Body (PSRB) accreditation</b>  |
| N/A   |
| <b>This information is correct at the time of validation, please refer to the PSRB register for current accreditation status.</b> |

|   |
|---|
| <b>Please add details of any conditions that may affect accreditation (e.g. is it dependent on choices made by a student?) e.g. completion of placement.</b>  |
|   |
| <b>HECoS codes</b>  |
| HECoS - HNC Electrical and Electronic Engineering 100163<br>HECoS - HNC Mechanical Engineering 100190   |
| <b>UCAS code</b>  |
| Available from GU Admissions  |
| <b>Relevant QAA subject benchmark statement/s</b>   |
| Subject Benchmark Statement Engineering February 2015. Subject benchmark statements for Engineering are aimed at Honours Degree and MEng level. However they have been referred to in the design of this programme. <a href="http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code">http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code</a> |
| <b>Mode of study</b>  |
| Part time   |
| <b>Normal length of study for each mode of study</b>  |
| 2 Years Day Release   |
| <b>Language of study</b>  |
| English / Welsh   |
| <b>Transitional arrangements for re-validated provision if applicable</b>   |
| The new provision will be introduced for both Level 4 and 5 cohorts from September 2021   |
| <b>The following University Award Regulations apply to this programme (highlight the appropriate ones and delete the others )</b>   |
| General Regulations and Definitions<br>Regulations for BTEC Higher National Qualifications<br>Language Admissions Policy  |

| OFFICE USE ONLY                                      |  |
|--|--|
| Date of validation event:                            | 21 April 2021  |
| Date of approval by Academic Board:                  | 6 July 2021  |
| Approved Validation Period:                          | 5 years  |
| Transitional arrangements approved (if revalidation) | <i>The new provision will be introduced for both Level 4 and 5 cohorts from September 2021</i>                   |
| Date and type of revision:                           | <i>Enter the date of any subsequent revisions (Detail the type of revision made and the implementation date)</i> |

## 1 Criteria for admission to the programme

### Standard entry criteria

Entry requirements are in accordance with the University's admissions policy, please click on the following link for more information. [Admissions policies](#)

The University's entry requirements are set out on our Admissions webpages

| Qualification                | Entry requirements                           |
|------------------------------|--|
| Foundation Year              | 48 Tariff points and /or relevant experience |
| Foundation Degree            | 48 Tariff points and /or relevant experience |
| 3 year Bachelors degree      | 112 Tariff points                            |
| Integrated Masters (4 years) | 120 Tariff points                            |

These figures are intended as a general guide. Each application is considered individually.

International entry qualifications are outlined on the National Academic Recognition and Information Centre (NARIC) as equivalent to the relevant UK entry qualification.

In addition to the academic entry requirements, all applicants whose first language is not English or Welsh must demonstrate English language proficiency.

European students are able to provide this evidence in a number of ways (please see <http://www.glyndwr.ac.uk/en/Europeanstudents/entryrequirements/> for details), including IELTS.

International students are required to provide an English Language Certificate which meets the requirements of the University (*please see <http://www.glyndwr.ac.uk/en/Internationalstudents/EntryandEnglishLanguageRequirements/> for details*).

Requirements and admission procedures remain in line with University Regulations for HNC. Admission on to the HNC programme is conditional upon potential students having gained a suitable pre-requisite qualification that has covered mathematics and a physical science subject to QCF level 3.

HNC students would normally meet one of the following admissions criteria:-

- (i) appropriate GCE A-levels;
- (ii) EdExcel/BTEC National Certificate or National Diploma in a suitable engineering discipline and which includes the mathematics module;
- (iii) a qualification equivalent to QCF level 3;
- (iv) certificate to indicate satisfactory completion of an appropriate Access course.

The partner institution is responsible for admitting the students onto the programme.

### **Non Standard entry criteria**

Other learning and experience may be considered for entry to the programme. A student may be allowed entry if he/she does not have the standard entry qualifications but has industrial experience in a relevant area of engineering and demonstrating to the programme team's satisfaction the ability to cope with the mathematical and science studies in the programme.

## **2 Record of Prior (Experiential) learning**

Applicants may enter the programme at various levels with Recognition of Prior Learning (RPL) or Recognition of Prior Experiential learning (RPEL) in accordance with the University General Regulations. Any programme specific restrictions are outlined below.

### **3 DBS Requirements**

N/A

### **4 Suitability for Practice Procedure**

N/A

### **5 Aims of the programme**

To develop students' theoretical and application knowledge of mechanical and electrical and electronic engineering and technology to a level consistent with that of a senior engineering technician (as defined by the Engineering Council) in order to have the intellectual and practical skills to work autonomously, or as a contributing member of a team in conjunction with professional engineers and other staff.

To provide the academic skills and knowledge to enable progress via the FdEng Engineering through to BEng (Hons) Engineering programmes.

### **6 Distinctive features of the programme**

There is a recognised shortage of qualified Electrical/Electronic and Mechanical Engineers in the UK and these programmes are designed to offer the student a broad based academic qualification which will bring lifelong rewards in a challenging industry.

The HNC is well established and its value is understood by all parties in the industry. Nearly all HNC students are sponsored by their employers and all of those students embarked upon an apprenticeship programme are sponsored. The attendance in a university setting of the HNC cohorts has had the effect of broadening horizons and consequently for a number of years progression to BEng (Hons) Engineering has taken place. The module content matches substantially the Subject Benchmark statement for Engineering, further underpinning the opportunities for progression to honours degree status.

Whilst not accredited, the curriculum for both programmes has been informed by the expectations associated with the awarding of EngTech status as defined by the Engineering Council and UK-SPEC.

The HNC Mechanical Technology provides a specialist work-related programme of study that covers the key knowledge, understanding and practical skills required in mechanical engineering sectors and also provide specialised studies which are directly relevant to individual vocations and professions in which students are currently working or in which they intend to seek employment. Students will gain a sound knowledge of the concept and process of engineering design, manufacturing and project management. The programme will help build a firm foundation for employment as technicians/technician engineers in a range of mechanical engineering sectors including aviation, defence, engineering management, manufacturing, and the automotive industry.

The HNC Electrical and Electronic Technology is seen by employers and their employees as being an established and trusted sub-degree vocational qualification which forms an integral part of the educational element of engineering apprenticeships.

The curriculum embraces both analytical content and its application in an industrial setting. The HNC Electrical and Electronic Technology will teach students the fundamentals of electronics, electrical engineering, power engineering and mathematics. After completing the course students will have the skills to contribute to the design and development of

electrical/electronic systems and processes. The Renewable Energy and Power Sectors are major employers in North Wales.

For the both programmes the Project module is undertaken in the workplace during the second year of the programmes. Underpinning knowledge needed for the Project is provided in the first year by the Engineering Design module which provides the knowledge of design principles implemented in the course of the Project. Additionally, the Business & Management Techniques module is partially assessed by a topical assignment which relates to employment law.

## **7 Credit Accumulation and exit awards**

*Guidance – add details of credit accumulation and exit awards. Any specific module/s which should be completed for the award of an ordinary degree should be specified.*

### Exit Awards

Successful completion of 120 credits at Level 4 and 30 credits at Level 5 entitles the student to the exit award of either

Higher National Certificate of Electrical & Electronic Technology

Or

Higher National Certificate of Mechanical Technology

## **8 Programme Structure Diagram, including delivery schedule**

Details of duration and the student experience in terms of expected attendance and engagement

The HNC programmes are of two years duration being delivered on a part time day release basis one day per week commencing at 09:00 and terminating at 18:30. There is one intake per year in September. Trimester 1 and 2 will consist of day release taught modules. Some of the modules may be conducted in an online environment. The Assessment Board will take place in June. First year and returning second year students enrol in September. Students who for whatever reason fail to complete the HNC programme successfully will be given a transcript of results which gives recognition to the numbers of modules achieved.

### Modes of study

For the HNC programmes 150 credits or equivalent worth of modules will be delivered in two years. The Project element will start in Year 2 Trimester 1 taking a further 28 weeks having a total notional study time of 200 hours. During this time the student will be responsible for managing 180 hours his/her time in independent study and 20 contact hours for consultation with the module tutor.

### Potential entry and exit points

The HNC is designed as a single entry and exit qualification, with no other exit awards.

Progression and award requirements for all awards, including exit awards.

The award of HNC on this programme requires the completion of 120 credits of study at level 4 plus 30 credits at level 5, including a 20 credits Project.

- To proceed to the next academic year a student would have successfully completed a minimum of 60 credits.
- A 1.5 hour tutorial (not module specific) is added each week to the teaching programme.

**Year 1 - HNC Electrical and Electronic Technology****Part-time delivery****Level 4**

|          |        |           |                                      |              |    |        |           |
|----------|--------|-----------|--------------------------------------|--------------|----|--------|-----------|
| Mod Code | ENG427 | Mod title | Engineering Mathematics              | Credit value | 20 | Core   | Sem 1 & 2 |
| Mod Code | ENG429 | Mod title | Electrical Engineering Science       | Credit value | 20 | Core   | Sem 1 & 2 |
| Mod Code | ENG438 | Mod title | Instrumentation & Control Principles | Credit value | 20 | Option | Sem 1 & 2 |
| Mod Code | ENG447 | Mod title | Electronics A                        | Credit value | 10 | Option | Sem 1     |
| Mod Code | ENG448 | Mod title | Electronics B                        | Credit value | 10 | Option | Sem 1     |
| Mod Code | ENG430 | Mod title | Engineering Design                   | Credit value | 10 | Core   | Sem 2     |
| Mod Code | ENG435 | Mod title | Electrical Power                     | Credit value | 20 | Option | Sem 2     |

**Year 2 - HNC Electrical and Electronic Technology****Part-time delivery****Level 4**

|          |        |           |                                  |              |    |      |           |
|----------|--------|-----------|----------------------------------|--------------|----|------|-----------|
| Mod Code | ENG426 | Mod title | Business & Management Techniques | Credit value | 20 | Core | Sem 1 & 2 |
| Mod Code | ENG432 | Mod title | Programmable Logic Controllers   | Credit value | 20 | Core | Sem 1 & 2 |

**Level 5**

|          |        |           |                                    |              |    |      |           |
|----------|--------|-----------|------------------------------------|--------------|----|------|-----------|
| Mod Code | ENG503 | Mod title | Project                            | Credit value | 20 | Core | Sem 1 & 2 |
| Mod Code | ENG505 | Mod title | Electrical & Electronic Principles | Credit value | 10 | Core | Sem 1 & 2 |

**Year 1 - HNC Mechanical Technology****Part-time delivery****Level 4**

|          |        |           |                                   |              |    |        |           |
|----------|--------|-----------|-----------------------------------|--------------|----|--------|-----------|
| Mod Code | ENG427 | Mod title | Engineering Mathematics           | Credit value | 20 | Core   | Sem 1 & 2 |
| Mod Code | ENG428 | Mod title | Mechanical Science                | Credit value | 20 | Core   | Sem 1 & 2 |
| Mod Code | ENG4AR | Mod title | Engineering Computer Applications | Credit value | 20 | Option | Sem 1 & 2 |
| Mod Code | ENG4AS | Mod title | Engineering Materials             | Credit value | 10 | Option | Sem 1     |
| Mod Code | ENG456 | Mod title | Plant Equipment Fundamentals      | Credit value | 20 | Option | Sem 1 & 2 |
| Mod Code | ENG430 | Mod title | Engineering Design                | Credit value | 10 | Core   | Sem 2     |

**Year 2 - HNC Mechanical Technology**  
**Part-time delivery**  
**Level 4**

|          |        |           |                                  |              |    |        |           |
|----------|--------|-----------|----------------------------------|--------------|----|--------|-----------|
| Mod Code | ENG426 | Mod title | Business & Management Techniques | Credit value | 20 | Core   | Sem 1 & 2 |
| Mod Code | ENG436 | Mod title | CAD CAM                          | Credit value | 20 | Option | Sem 1 & 2 |
| Mod Code | ENG4AT | Mod title | Manufacturing Technology         | Credit value | 20 | Option | Sem 1 & 2 |

**Level 5**

|          |        |           |                       |              |    |      |           |
|----------|--------|-----------|-----------------------|--------------|----|------|-----------|
| Mod Code | ENG503 | Mod title | Project               | Credit value | 20 | Core | Sem 1 & 2 |
| Mod Code | ENG506 | Mod title | Mechanical Principles | Credit value | 10 | Core | Sem 1 & 2 |

## 9 Intended learning outcomes of the programme

### HNC Electrical and Electronic Technology

#### Knowledge and Understanding

|    | Level 4   | Level 5   |
|----|---|---|
| A1 | Demonstrate familiarity with the basic facts and principles of Electrical & Electronic Engineering.<br><br>Demonstrate safe practice in workshop and laboratory environments.                     | Apply knowledge and understanding of the fundamental principles and practices of Electrical & Electronic Engineering.<br><br>Apply safe practice in workshop and laboratory environments.   |
| A2 | Demonstrate a working understanding of the principles and practices of Electrical & Electronic Engineering.<br><br>Demonstrate competence in workshop and practice and laboratory investigations. | Evaluate and analyse a range of concepts and theories, models and techniques to make appropriate engineering operational and management decisions in Electrical & Electronic Engineering.<br><br>Competently further develop workshop practice and laboratory investigations. |
| A3 | Apply electrical and electronic theory to devices and systems.  | Apply advanced electrical and electronic theory to devices and systems.   |

#### Intellectual Skills

|    | Level 4   | Level 5   |
|----|---|---|
| B1 | Undertake routine applications of basic engineering principles and practices with guidance provided by academic staff.  | Apply knowledge and understanding of essential concepts, principles and models within engineering principles and practices with minimal guidance provided by academic staff |
| B2 | Tackle routine engineering problems by means of mathematical analysis of the principles and through laboratory investigation and workshop activity such as reverse engineering. | Interpret, analyse and evaluate a range of engineering data, sources and information to inform evidence-based decision-making.  |

|    | Level 4   | Level 5   |
|----|---|---|
| B3 | Relate a number of facts, ideas and elements to form a coherent approach to engineering design problems.                    | Critique a range of engineering information technology systems and operations and their application to maximise and successfully meet strategic objectives. |
| B4 | Form value judgements based on sound engineering principles when addressing engineering and engineering related challenges. | Critically evaluate current principles and operational practices used within engineering as applied to problem-solving.                                     |

### Subject Skills

|    | Level 4  | Level 5  |
|----|--|--|
| C1 | Develop technical skills involving engagement in practical and project work. | Expand development of technical skills involving engagement in practical and project work, demonstrate ability to generate ideas for solving engineering problems. |
| C2 | Relate theoretical and technology studies to industrial applications.        | Synthesise knowledge and critically evaluate strategies and plans to understand the relationship between theory and actual world engineering situations.           |

### Practical, Professional and Employability Skills

|    | Level 4  | Level 5  |
|----|--|--|
| D1 | Communicate clearly and concisely both orally and in writing adopting academic and technical protocols in report writing ensuring that sentences possess both subject and predicate. | Develop different strategies and methods to show how resources (human, financial, environmental and information) are integrated and effectively managed to successfully meet objectives. Communicate confidently and effectively, both orally and in writing both internally and externally with engineering professionals and other stakeholders. |
| D2 | Apply arithmetic and algebraic concepts to the solution of engineering problems. Develop the use of complex numbers.   | Use quantitative skills to manipulate data, evaluate and verify existing theory. Have the ability to deploy processes, principles,   |

|    | Level 4  | Level 5  |
|----|--|--|
|    |  | theories, skills and techniques to analyse, specify, build and evaluate processes and outcomes.  |
| D3 | Demonstrate computer literacy in report writing using Word and Excel packages and in the use of engineering application and simulation software.           | Competently use digital literacy to access a broad range of research sources, data and information.  |
| D4 | Demonstrate an ability to engage in some self-directed learning and to work to schedules.<br>Exhibit the social skills required in both work and learning. | Develop self-reflection, including self-awareness, to become an effective self-managing student, appreciating the value and importance of the self-reflection process. Develop emotional intelligence and sensitivity to diversity in relation to people, cultures and environments. Develop a range of skills to ensure effective team working, project and time management, independent initiatives, organisational competence and problem-solving strategies. |

## HNC Mechanical Technology

### Knowledge and Understanding

|    | Level 4   | Level 5  |
|----|---|--|
| A1 | Demonstrate familiarity with the basic facts and principles of Mechanical Engineering.<br><br>Demonstrate safe practice in workshop and laboratory environments.                    | Apply knowledge and understanding of the fundamentals principles and practices of Mechanical Engineering.<br><br>Apply safe practice in workshop and laboratory environments.  |
| A2 | Demonstrate a working understanding of the principles and practices of Mechanical Engineering.<br><br>Demonstrate competence in workshop and practice and laboratory investigations | Evaluate and analyse a range of concepts and theories, models and techniques to make appropriate engineering operational and management decisions in Mechanical Engineering.<br><br>Competently further develop workshop practice and laboratory investigations. |
| A3 | Apply mechanical theory to devices and systems.   | Demonstrate an understanding of the critical theoretical context to devices and systems.   |

## Intellectual Skills

|    | Level 4   | Level 5  |
|----|---|--|
| B1 | Undertake routine applications of basic engineering principles and practices with guidance provided by academic staff.  | Explore applications of engineering principles and practices, drawing upon a variety of personal skills and upon a variety of academic and non-academic sources. |
| B2 | Tackle routine engineering problems by means of mathematical analysis of the principles and through laboratory investigation and workshop activity such as reverse Engineering. | Interpret, analyse and evaluate a range of engineering data, sources and information to inform evidence-based decision-making.                                   |
| B3 | Relate a number of facts, ideas and elements to form a coherent approach to engineering design problems.  | Critique a range of engineering information technology systems and operations and their application to maximise and successfully meet strategic objectives.      |
| B4 | Form value judgements based on sound engineering principles when addressing engineering and engineering related challenges  | Critically evaluate current principles and operational practices used within engineering as applied to problem-solving.  |

## Subject Skills

|    | Level 4  | Level 5  |
|----|--|--|
| C1 | Develop technical skills involving engagement in practical and project work. | Develop a skill-set to enable the evaluation of appropriate actions taken for problem-solving in specific engineering contexts.                          |
| C2 | Relate theoretical and technology studies to industrial applications         | Synthesise knowledge and critically evaluate strategies and plans to understand the relationship between theory and actual world engineering situations. |

## Practical, Professional and Employability Skills

|    | Level 4  | Level 5   |
|----|--|---|
| D1 | Communicate clearly and concisely both orally and in writing adopting academic and technical protocols in report writing ensuring that sentences possess both subject and predicate. | Develop different strategies and methods to show how resources (human, financial, environmental and information) are integrated and effectively managed to successfully meet objectives. Communicate confidently and effectively, both orally and in writing both internally and externally with engineering professionals and other stakeholders.  |
| D2 | Apply arithmetic and algebraic concepts to the solution of engineering problems. Develops the use of complex numbers.  | Use quantitative skills to manipulate data, evaluate and verify existing theory. Apply arithmetic and algebraic concepts to the solution of engineering problems. Develop the use of complex numbers.<br>Have the ability to deploy processes, principles, theories, skills and techniques to analyse, specify, build and evaluate processes and outcomes.<br>Apply knowledge of engineering principles to the solution of engineering problems.  |
| D3 | Demonstrate computer literacy in report writing using Word and Excel packages and in the use of engineering application and simulation software.                                     | Competently use digital literacy to access a broad range of research sources, data and information. Demonstrate computer literacy in report writing using Word and Excel packages and in the use of engineering application and simulation software.  |
| D4 | Demonstrate an ability to engage in some self-directed learning and to work to schedules.<br>Exhibit the social skills required in both a work and learning.                         | Develop self-reflection, including self-awareness, to become an effective self-managing student, appreciating the value and importance of the self-reflection process. Demonstrate an ability to engage in some self-directed learning and to work to schedules.<br><br>Develop emotional intelligence and sensitivity to diversity in relation to people, cultures and environments. Exhibit the social skills required in both work and learning<br>Develop a range of skills to ensure effective team working, project and time management, independent initiatives, organisational competence and problem-solving strategies. |

## **10 Learning and teaching strategy**

Outcomes are achieved through the adoption of a range of strategies which include workshop/lab activities, interactive classes combining lecture and tutorial styles, and self-directed learning through investigative assignment work.

Some modules will be underpinned by use of computer assisted packages, the learning element will be evaluated by a set of computer based assignments.

Innovative use of computer-based multi-choice questions package, as both a formative learning tool (including practice test) and as element of assessment, is expected to form a key part in the development of the modules. Online tutorials and taught sessions can be used for a blended learning method if necessary. Considerable use of the college VLE is encouraged as a method of submitting work for assessment in line with the University's electronic submission policy.

A feature of the programme that exemplifies the links between the university, the student and industry is the individual project, which is intended to be work-based. The use of cost benefit analysis to determine which of several proposed projects would benefit the employer is of real value to both the employer and the student.

Feedback is provided continuously to students through informal contact with subject lecturers and tutors in the seminar/tutorial and laboratory settings. In accordance with University Guidance, feedback is provided on assessed practical work normally within three weeks of submission of the work.

## **11 The Wrexham Glyndwr Graduate**

At Glyndŵr University we aim to help students develop and enhance key employability skills and capabilities during their study. There are three key areas with different attributes, attitudes and skillsets and the aim is to help students have the opportunity to enhance and develop skills such as resilience, adaptability, confidence, team working, emotional intelligence and communication, creativity and acting ethically and sustainably. Programmes are designed to enable students to develop and enhance these skills via module content, module learning outcomes and assessment opportunities. Each module will help provide different opportunities for developing and enhancing these capabilities.

The Careers team are available to provide information, advice and guidance and access to resources for potential students, current students and graduates. WGUConnect provides students with access to an online directory of vacancies.

The Careers team can support students with employability and interview skills such as use of the STAR (Situation, Task, Action, Result) technique that many recruiters use to gather relevant information about a specific capability that the job requires.

## **12 Work based/placement learning statement**

With regards to work-based learning HNC students are in employment and so issues associated with placements do not arise.

All the HNC students enrolled on the course are from local employers. These are part time day release courses with employer sponsorship so specific work based placement/learning is managed by their employers.

Within the two-year part time programmes, students are expected to be in a relevant full-time position and to apply relevant learning to their work-place through applied projects and utilising real-world examples within their assessments.

Throughout the programme, the projects and assignments are coordinated with the employer so that HNC students can demonstrate the necessary skills and competencies within their position and for their organization. The modules of the programme are based on fundamental theoretical and scientific knowledge, as well as on the assessment of real-life problems in the workplace and their solutions that students can apply after completing the course

### 13 Welsh medium provision

Students have the right to request delivery, assessment and feedback through the medium of Welsh. The programmes will be delivered through the medium of English unless we receive any requests for Welsh delivery. Students requiring delivery in Welsh are identified upon application and during induction and relevant support is put in place.

The team is supported by the College's Welsh Language. Team to provide any support and resources required.

### 14 Assessment strategy

The programme team are committed to delivering an assessment strategy which is student centred, reflects the requirements of engineering practice and offers opportunities for students to reflect on their own working practice in engineering fields they choose.

The programme provides opportunities for formative, diagnostic and summative feedback. The assessment methods used reflect the needs of the student group and allow for the knowledge and learning outcomes of the programme to be tested as well as allowing for the development and assessment of practical and transferable skills.

The HNC utilises a range of assessment methods chosen to suit the contents and outcomes of individual modules. In summary these are:

- In-course written test, favoured by the more mathematically-oriented subjects, including the science/ principles modules. On-line open book testing is a further supporting option.
- Practical work (laboratory and/or workshops) with a set of written log reports or one major formal report; this includes the main Project;
- An investigative assignment requiring the students to carry out work by self-study or to reinforce/extend work from the classroom;
- Set of class exercises based on software package.

#### HNC Electrical & Electronic Technology

| Module code & title                                       | Assessment type and weighting              | Indicative submission date |
|---|--|----------------------------|
| ENG426 Business & Management Techniques (L4; cv 20; core) | 50% Coursework<br>50% In-class test        | Y2; S1<br>Y2; S2           |
| ENG427 Engineering Mathematics (L4; cv 20; core)          | 50% In-class test 1<br>50% In-class test 2 | Y1; S1<br>Y1; S2           |
| ENG429  | 50% In-class test                          | Y1; S1                     |

| Module code & title  | Assessment type and weighting       | Indicative submission date |
|--|-------------------------------------|----------------------------|
| Electrical Engineering Science<br>(L4; cv 20; core)                  | 50% Coursework                      | Y1; S2                     |
| ENG430<br>Engineering Design<br>(L4; cv 10; core)                    | 100% Group Project                  | Y1; S2                     |
| ENG432<br>Programmable Logic<br>Contorllers<br>(L4; cv 20; core)     | 40% Coursework<br>60% Practical     | Y2; S1<br>Y2; S2           |
| ENG435<br>Electrical Power<br>(L4; cv 20; opt)                       | 50% In-class test<br>50% Practical  | Y1; S1<br>Y1; S2           |
| ENG447<br>Electronics A<br>(L4; cv 10; opt)                          | 50% In-class test<br>50% Practical  | Y1; S1                     |
| ENG448<br>Electronics B<br>(L4; cv 10; opt)                          | 50% In-class test<br>50% Practical  | Y2; S1                     |
| ENG438<br>Instrumentation & Control<br>Principles (L4; cv 20; opt)   | 60% Practical<br>40% Coursework     | Y1; S1<br>Y1; S2           |
| ENG503<br>Project<br>(L5; cv 20; core)                               | 10% Presentation<br>90% Report      | Y2; S2<br>Y2; S2           |
| ENG505<br>Electrical & Electronic<br>Principles<br>(L5; cv 20; core) | 50% In-class test<br>50% Coursework | Y2; S1<br>Y2; S2           |

#### HNC Mechanical Technology

| Module code & title  | Assessment type and weighting              | Indicative submission date |
|--|--|----------------------------|
| ENG426 Business &<br>Management Techniques<br>(L4; cv 20; core)    | 50% Coursework<br>50% In-class test        | Y2; S1<br>Y2; S2           |
| ENG427<br>Engineering Mathematics (L4;<br>cv 20; core)             | 50% In-class test 1<br>50% In-class test 2 | Y1; S1<br>Y1; S2           |
| ENG428<br>Mechanical Science<br>(L4; cv 20; core)                  | 50% Portfolio<br>50% In-class test         | Y1; S1<br>Y1; S2           |
| ENG430<br>Engineering Design<br>(L4; cv 10; core)                  | 100% Group Project                         | Y1; S2                     |
| ENG4AS<br>Engineering Materials<br>(L4; cv 10; opt)                | 50% Portfolio<br>50% Coursework            | Y1; S1<br>Y1; S1           |
| ENG4AR<br>Engineering Computer<br>Applications<br>(L4; cv 20; opt) | 50% Portfolio<br>50% Coursework            | Y1; S1<br>Y1; S2           |

| Module code & title  | Assessment type and weighting      | Indicative submission date |
|--|------------------------------------|----------------------------|
| ENG4AT<br>Manufacturing Technology<br>(L4; cv 20; opt)     | 50% In-class test<br>50% Portfolio | Y2; S1<br>Y2; S2           |
| ENG436<br>CAD/CAM<br>(L4; cv 20; opt)                      | 50% Portfolio 1<br>50% Portfolio 2 | Y2; S1<br>Y2; S2           |
| ENG456<br>Plant Equipment<br>Fundamentals (L4; cv 20; opt) | 60% Report<br>40% Case study       | Y1; S1<br>Y1; S2           |
| ENG503<br>Project<br>(L5; cv 20; core)                     | 10% Presentation<br>90% Report     | Y2; S2                     |
| ENG506<br>Mechanical Principles<br>(L5; cv 20; core)       | 70% In-class test<br>30% Practical | Y2; S1<br>Y2; S2           |

## 15 Assessment and award regulations

### Derogations

N/A

### Non Credit Bearing assessment

N/A

### Borderline Classifications (Undergraduate programmes)

N/A

### Ordinary Degrees

N/A

## 16 Accreditation

N/A

## 17 Quality Management

All provision is expected to comply with the University processes for quality assurance, the QAA Quality Code and any specific PSRB requirements to ensure the quality of the learning and teaching on the programme. The University uses the following mechanisms to help evaluate, enhance and review programmes delivery;

- Student Evaluation of Module forms
- Student Voice Forum
- Individual student feedback
- Student representatives
- Annual Monitoring reports
- Periodic review and re-validation process
- External Examiner reports
- PSRB requirements and accreditation activities
- National Student Survey (NSS)

The Glyndŵr Higher National programmes: HNC Mechanical Technology & HNC Electrical & Electronic Technology, are being validated for delivery by the University's Partners only.

The programmes will be managed under the auspices of the Faculty of Art, Science and Technology and will develop within the terms of the overall management of curriculum within the school.

## Responsibilities

**The Programme Leader/Academic Link** at GU will be responsible for the following:

- Day-release franchise provision at Coleg Cambria (Deeside campus)
- Quality assurance and standards matters on the programmes, including any instances of delivery at partner institutions
- The management and development of curriculum and the course portfolio
- Prepare an Annual Report summarizing their views on the operation of the collaborative programmes at the partner

**The Programme Leader (Course tutors) at the partner Institution** will be responsible for the following:

- Regular communication with the University's designated Academic Link Tutor for academic related matters
- Student tracking and student records
- Attending Assessment Board and confirming all modules marks submitted to the SPC
- Quality assurance and annual monitoring, including compilation of the Annual Monitoring Report
- Coordination of admissions activities and other recruitment activities, including relevant publicity activities.

**The Module Tutor at the partner Institution** takes responsibility for the following:

- The maintenance and development of teaching and learning materials for all students enrolled on the module
- Internal Verification (moderation) of assessed work by another member of the team at partner organisation or jointly moderated across all delivery sites/the University, both before the work is set and after it has been marked/graded
- The setting, marking and collation of marks for all module assessments and submission of student results to the Programme Leader (Course Tutors)
- Tutorial support for students taking the module which they are responsible
- Quality monitoring, including processing of annual student feedback questionnaires and, where appropriate, student feedback for individual modules.

## The programme team meeting

There will be at least two cross-institutional meetings each year, consisting of the staff from the teaching team, the Programme Leaders, Curriculum Director and Academic Link Tutor. Student representatives, invited representatives of other departments (such as Learning Resources and Information Services), colleagues from Industry will also be invited.

## Quality and Standards

External review of quality and standards within the programme is provided by the External Examiner, who is able to compare provision at Glyndŵr with that of other Universities and Colleges of Higher Education.

Student Voice Forum (SVF) will be held twice per year, usually in November and March, and is arranged in the partner Institution which provides a forum for students, via representatives, to provide formal comment on the way their programme and the learning environment, generally, is managed. The minutes and the response to the SVF are posted on the VLE. In

addition the External Examiner report and team response to the report will be made available to students via the SVF and VLE. The minutes and the response to the SVF will also inform the Academic Link Annual Report.

In parallel with this is the informal process by which students can individually approach programme leaders, or individual lecturers, with concerns. This informal 'open' approach has proved to be effective.

Formalised anonymous feedback is obtained from SPOM and SPOC surveys:  
SPOM (Student Perception Of Module) is a short questionnaire set by the module tutor at the end of that module in order to provide feedback about the success of the module.

SPOC (Student Perception Of Course) is set by the programme coordinator at the end of the course to obtain feedback about the operation of the programme as a whole. This is used by the programme team to inform future provision of the programme.

HNC students will have the opportunity to fill in these feedback forms in the end of each trimester.

Glyndŵr University has a comprehensive quality assurance structure. Starting with the Standards and Quality Committee and Academic Board which oversee all quality procedures, together with an Academic Registrar responsible for quality coordination, there is a system for quality to be managed at programme level and reported upwards, via Academic Subject Team meetings, to the Senior Management team.

In line with Glyndŵr University's QA systems and procedures an annual programme monitoring report (AMR) will be prepared by each partner Programme Leader (Course tutors) in November of each academic year. The AMR's will be formally discussed and presented to the School Board at a meeting which takes place during November/December. The AMR will include performance of modules as well as overall programme performance using indicators such as mean, standard deviation, retention data and feedback from students and staff.

## **18 Support for Students**

Institutional level support for students

Support for students at Glyndwr University:

The University has a range of departments that offer the support for students as:

- Library (including access to one-line resources)
- VLE
- Glyndŵr Students' Union
- Senior Partnerships Officer, Glyndŵr University.

Support for students at Partner institutions:

Students are able to access support at their site of delivery which included; VLE, Library services including on-line access, funding welfare disability and careers support, study skills support, ALN as well as the services offered by WGU.

Students engaged in HNC programmes are entitled to access Glyndwr University's E-Learning resources. Students have access to e-books, e-journals and databases.

All students on the programmes will have the opportunity to discuss their application with staff at Partner institution, and receive appropriate advice and guidance prior to admission.

New students on the programmes will undergo an induction programme at Partner institutions which will provide them with a full introduction to the programme, and will include elements of work on study skills, and professional development.

All students on the programmes will receive a Student Handbook at Partner institutions which will contain details and guidance on all aspects of the programme and forms of student support and guidance.

Student attendance will be subject to regular monitoring through registers at Partner institution, and this will be a means of addressing issues of student support.

Every student is allocated a Personal Tutor (PT) at the partner organisation when he/she has registered for one of the programmes. The Personal Tutor is someone students can contact to discuss any problems of an academic nature. These may relate to special needs or personal problems that may affect the student's academic performance. PT sessions are scheduled into the teaching programme.

Student academic support needs will be met in the following ways.

- Individual tutorials with academic tutors to identify individual learning needs and aspirations which will then be monitored throughout the programme.
- Following confirmed assessment of learning needs, the team will make reasonable adjustments to assessments in order to reflect the needs of students with support needs.
- Tutors will use the VLE as a repository for course material and are actively engaging in developing opportunities to use this to provide feedback to students, promote online discussion and promote a VLE academic community.
- Induction programmes will include Study Skills and IT and the VLE.
- Each programme of study will have arrangements in place for a programme student representative. This representative will be invited to attend SVF meetings and where appropriate, relevant Institutional meetings.

Academic problems should first be addressed to the Module Tutor concerned at Partner organisation. If the problem is not resolved or it does not relate to a specific module, then the Programme Leader (Course Tutors) at Partner organisation should be contacted. If the problem is not resolved in-house, then the Glyndwr University team should be contacted via Academic Link Tutor or Programme Leader.

Other supports for students include the opportunity to access study skills, individual and group tutorials with specialist teachers, additional support with English, Mathematics and ICT, and revision techniques.

Programme specific support for students

Specific learning resources are available via the partner college libraries. Generally, each partner offers a comprehensive learning support facility comprising a lending library with specialist sections, a reference library with journals and research papers (complete with shared resources with Glyndwr and Bangor Universities), free-standing computers and, a team of support staff well able to guide students via software links and other facilities to sources that they need.

## **19 Equality and Diversity**

Glyndwr University is committed to providing access to all students and promotes equal opportunities in compliance with the Equality Act 2010 legislation. This programme complies fully with the University's Equality and Diversity Policy, ensuring that everyone who has the potential to achieve in higher education is given the chance to do so. Please click on the

following link for more information

<https://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/EqualityandDiversity/>