Module specification

When printed this becomes an uncontrolled document. Please access the Module Directory for the most up to date version by clicking on the following link: Module directory

Refer to guidance notes for completion of each section of the specification.

Module Code	ENG5AM
Module Title	Project (Feasibility Study)
Level	4
Credit value	40
Faculty	FAST
HECoS Code	100549
Cost Code	GAME

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BEng (Hons) Low Carbon Energy, Efficiency and Sustainability	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	48 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	48 hrs
Placement / work based learning	0 hrs
Guided independent study	352 hrs
Module duration (total hours)	400 hrs

For office use only	
Initial approval date	21/09/2020

For office use only	
With effect from date	Sept 2020
Date and details of revision	Sept 2022: template update and addition of AHEP4 LOs
Version number	2

Module aims

Following on from the project at level 4, this feasibility study looks at alternative practices and infrastructure to reduce environmental impact

Module Learning Outcomes - at the end of this module, students will be able to:

1	Explain how the environmental impacts of an organisation can be managed within the context of an environmental management system.
2	Analyse the use and application of environmental auditing and management tools.
3	Analyse the feasibility of energy reduction measures and a number of renewable energy schemes using specialist software for a given business and make recommendations.
4	Evaluate the feasibility of a number of other environmental impact mitigation measures for a given business and make recommendations.

In addition to the module learning outcomes, students will also cover the following accreditation of higher education programme (AHEP) fourth edition learning outcomes: C1, C3,C4, C7, C8, C9, C10, C13 & C18.

Assessment

Indicative Assessment Tasks:
This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

The assessment will be carried out using the student's own workplace as a case study for a feasibility study into a range of measures that can be used to reduce a businesses impact on the environment and or save money. The case study will include exploring major areas of environmental impact and suggest an optimal solution for its mitigation and to comply with current and possible future legislation.

A typical report (5000 words) may include *some* of the following:

1. A range of energy reduction measures with recommendations and payback times with recommendations.

2. Using specialist software assess the feasibility of wind, solar, hydro and biomass renewable energy schemes for the business with optimised recommendations and payback times. (where possible).

3. A recycling and waste management scheme proposal to improve current practices if possible.

4. How any other major environmental and ecological impacts of the business can be mitigated with recommendations.

5. A summary of any environmental, financial, social and marketing advantages the recommendations may bring within a range of future scenarios.

6. The production of a professional report and 10-minute presentation aimed at business owners, board level or management of the student's workplace.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 3, 4	Case Study	100%

Derogations

A derogation from regulations has been approved for this module which means that whilst the pass mark is 40% overall, each element of assessment (where there is more than one assessment) requires a minimum mark of 30%.

Learning and Teaching Strategies

Lectures

Formal lectures of facts and concepts relating to all aspects of environmental issues and its measurement (See syllabus below).

Tutorials

Regular 1 to 1 meeting with feedback and suggestions on progress.

Close interaction with students ensuring that the work presented during lectures has been understood with the use of real-world scenarios and problem-solving exercises, with specific help being given in order to overcome any learning problems.

Indicative Syllabus Outline

The syllabus will cover an up to date overview of the following topics:

- Environmental management systems and their application.
- Assessment of Solar PV and thermal schemes using specialist software.
- Assessment of wind energy schemes specialist software.
- Assessment of hydro schemes specialist software.
- Assessment of biomass schemes.
- Ground and air source heat pumps.
- A range of environment mitigation measures for a range of industrial processes.
- Future possible legislation and future proofing

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University Harvard Referencing Guidance.*

Essential Reads

Environmental Audit A Complete Guide - 2020 Edition, Gerardus Blokdyk. ASIN: B084L5XTLJ

Other indicative reading
Teaching materials

University resource finder

https://www.iema.net/

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Guidance, from the following list, delete the attributes that are not covered by this module

Core Attributes
Engaged
Ethical

Key Attitudes
Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets
Organisation
Critical Thinking
Communication