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

<b>Module Code:</b>	ENG5AM
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<b>Module Title:</b>	Project (Feasibility Study)
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<b>Level:</b>	4	<b>Credit Value:</b>	40
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<b>Cost Centre(s):</b>	GAME	<b>HECoS code:</b>	100549
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<b>Faculty:</b>	FAST	<b>Module Leader:</b>	D. Sprake
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Scheduled learning and teaching hours	48 hrs
Placement tutor support	<a href="#">Click here to enter hours.</a> hrs
Supervised learning eg practical classes, workshops	<a href="#">Click here to enter hours.</a> hrs
Project supervision (level 6 projects and dissertation modules only)	<a href="#">Click here to enter hours.</a> hrs
<b>Total contact hours</b>	<b>48 hrs</b>
Placement / work based learning	
Guided independent study	352 hrs
<b>Module duration (total hours)</b>	<b>400 hrs</b>

<b>Programme(s) in which to be offered (not including exit awards)</b>	Core	Option
BEng (Hons) Low Carbon Energy, Efficiency and Sustainability	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>Pre-requisites</b>
None

<b>Office use only</b>	
Initial approval: 21/09/2020	Version no:1
With effect from: 28/09/2020	
Date and details of revision:	Version no:

**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.

<b>Employability Skills The Wrexham Glyndŵr Graduate</b>	<b>I = included in module content A = included in module assessment N/A = not applicable</b>
<i>Guidance: complete the matrix to indicate which of the following are included in the module content and/or assessment in alignment with the matrix provided in the programme specification.</i>	
<b>CORE ATTRIBUTES</b>	
Engaged	I
Creative	I
Enterprising	I
Ethical	I/A
<b>KEY ATTITUDES</b>	
Commitment	A
Curiosity	I/A
Resilient	A
Confidence	A
Adaptability	A
<b>PRACTICAL SKILLSETS</b>	
Digital fluency	A
Organisation	A
Leadership and team working	I
Critical thinking	A
Emotional intelligence	I/A
Communication	A

## 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%.

## Assessment:

Indicative Assessment Tasks:

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 withing 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%

## 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.

**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:****Essential reading**

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

**Other indicative reading**

*Teaching materials  
University resource finder  
<https://www.iema.net/>*