

## Module specification

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Module Code	ENG795
Module Title	Project Management, Innovation & Intellectual Property
Level	Level 7
Credit value	20 credits
Faculty	FAST
HECoS Code	100820
Cost Code	GAME

### Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Innovative Design MSc Innovative Design with Advanced Practice	Core

### Pre-requisites

None

### Breakdown of module hours

Learning and teaching hours	30 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
<b>Total active learning and teaching hours</b>	<b>30 hrs</b>
Placement / work-based learning	0 hrs
Guided independent study	170 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

For office use only	
Initial approval date	22 <sup>nd</sup> Aug 2022
With effect from date	Sept 2022
Date and details of revision	
Version number	1

## Module aims

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This module provides a grounding in modern practices in Project Management, techniques to motivate innovative design, and other skills required to support product innovation and development, including an overview of different types of intellectual property and patents.

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

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1	Recognise and apply standard project management tools to judge progress, recognise progress obstacles and select appropriate actions.
2	Critically evaluate the key steps in the innovation process and apply techniques to synthesize new innovative solutions. Discriminate between incremental solutions and paradigm shift solutions and explain the significance of the latter.
3	Recognise the different forms of Intellectual Property (IP), and the legal protection that applies to each type. Discriminate between types of IP and the more appropriate means of protecting it.

## Assessment

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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.

**Assessment One:** An individually prepared portfolio consisting of a range of assessments such as case studies, laboratory work and Moodle Quiz, introducing the topic areas of each learning outcomes. Guidance material will be provided, which the students will use to generate a Portfolio of work. Assessment one is an individual prepared portfolio and represents 100% of the overall module mark.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-3	Portfolio	100%

## Derogations

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None

## Learning and Teaching Strategies

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A series of workshop style lectures with student-led seminars and small group activities. Directed learning using library and internet resources will be facilitated using Moodle and MS Teams. This module will also follow the ALF (Active Learning Framework) guidelines, which will include alternative methods of assessment and a blended approach to delivery, with some theory and software sessions being delivered online (depending on requirements and student experience).

## Indicative Syllabus Outline

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- Standard project management tools: Gantt Charts, Milestones, the Critical Path, Risk Review and Mitigation planning, Quality Management, and Failure Modes and Effects Analysis.
- Techniques that support the innovation process such as de Bono's "Six Thinking Hats" and TRIZ. The concept of "Incremental solutions" and "Paradigm shifts" and the significance in terms of the value of the innovation achieved, as illustrated by the "S" curve.
- Human behaviour with respect to possible innovative products or solutions, and strategies to address problems arising from unanticipated behaviours.
- An overview of the history of philosophy of science over the last 400 years, in which a number of philosophers will be considered in detail, and the impact the concepts they explored had on the development of new science and technology influenced products.
- The different forms of Intellectual Property (IP), and the legal protection that applies to each type. Selection of appropriate means for protecting IP.
- The structure of a Patent and its key parts, such as dates, inventors, claims, abstract and the prior art. How the breadth and strength of protection of a patent provide a means for assessing potential value.

## Indicative Bibliography:

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### Essential Reads

N. Patel, *Practical Project Management for Engineers*. Boston, MA: Artech House, 2019.

### Other indicative reading

E. De Bono, *De Bono's thinking course*. London: BBC Books, 1991.

K. Gadd, *TRIZ for engineers: enabling inventive problem solving*. Chichester: Wiley, 2011.

D. Bainbridge, *Intellectual Property*. 6<sup>th</sup> ed. Harlow, England: Pearson Longman, 2007.

Plus, various others to be signposted on Moodle.

## Employability skills – the Glyndŵr Graduate

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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.

### Core Attributes

Engaged  
Enterprising  
Creative  
Ethical

**Key Attitudes**

Commitment

Curiosity

Resilience

Confidence

Adaptability

**Practical Skillsets**

Digital Fluency

Organisation

Critical Thinking

Emotional Intelligence

Communication