When printed this becomes an uncontrolled document. Please access the Module Directory for the most up to date version by clicking <u>here</u>.

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

Module Code:	ARD555

Module Title:	Environmental Sustainability

Level:	5	Credit Value:	20

Cost Centre(s):	GADC	<u>JACS3</u> **code**: <u>HECoS</u> **code**:	H223/100549

Faculty	FAST	Module Leader:	Steve Jarvis

Scheduled learning and teaching hours	12 hrs
Placement tutor support	0hrs
Supervised learning eg practical classes, workshops	18 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total contact hours	**30** hrs
Placement / work-based learning	
Guided independent study	170 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BA(Hons) Product Design	✓	☐

Pre-requisites
N/A

Office use only Initial approval: 08/09/2020 With effect from: 01/09/2022 Date and details of revision:	Version no:1 Version no:

Module Aims
The module will also aim to deliver the following points: • Enable students to design and develop alternative solutions to products or packaging that have a detrimental effect on the environment. • To empower students in becoming socially and environmentally aware of their surroundings and the affect their designs and future products play a part in contributing to or preventing climate change. • To develop students' abilities to identify products or future products that are potentially harmful to the environment or an eco-system and develop alternative solutions. • To expand the student's knowledge and awareness of the disposal of products when they have reached 'end of life' use and the environmental impact.

Module Learning Outcomes - at the end of this module, students will be able to	
1	Demonstrate and evidence alternative solution or solutions to single use products and non-recyclable packaging.
2	Evidence, through experimenting, analysing and reflecting critically throughout the project, a solution to an environmental issue.
3	Apply knowledge and principles developed in workshops to evaluate and resolve environmental and sustainability issues within specific areas of product design.
4	Analyse, and evaluate the environmental impact of 'end of life' use of products and packaging

Employability Skills The Wrexham Glyndŵr Graduate	I = included in module content A = included in module assessment N/A = not applicable
CORE ATTRIBUTES	
Engaged	I
Creative	IA
Enterprising	IA
Ethical	IA
KEY ATTITUDES	
Commitment	IA
Curiosity	IA
Resilient	IA
Confidence	IA
Adaptability	IA
PRACTICAL SKILLSETS	
Digital fluency	IA
Organisation	IA
Leadership and team working	I
Critical thinking	IA
Emotional intelligence	IA
Communication	IA

Template updated: September 2019

Derogations
None

Assessment:
Indicative Assessment Tasks:
Students will produce coursework that demonstrates their ability to examine, analyse and apply solutions to environmentally harmful products and packaging to a professional standard .   Emphasis will be placed on the recording and evaluation of the design process and the solution produced.   Assessment criteria will include;   • quality of design development,   • suitability of solution,   • depth of awareness of environmental issues, and 'end of use' solutions.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-4	Coursework	100

Learning and Teaching Strategies:
• Lectures will allow students to examine, analyse and apply design thinking, problem solving, experimentation, fault finding, sketching and CAD software methods and techniques.   • Assignments will enable students to design and produce a physical product applying design techniques and focused on solutions to environmental issue(s).   • Technical demonstrations will enable students to acquire the technical skills needed to complete the assignments.   • Tutorial guidance, group critique and student seminars will underpin the student's skill development and understanding of the design and creation process.

Syllabus outline:
This module develops the student's ability to examine, identify, experiment and apply problem solving skills to make relevant well thought out recommendations to improve environmental factors of a product or packaging. The module will also require the students to the recognise an area of climate change that can be prevented and fixed with the use of a product or device. The students will develop an enhanced appreciation of problem solving and the application of methods and techniques used in the design process including Life Cycle Analysis utilising appropriate software as well as the physical skills of using equipment to produce products/prototype products.

Indicative Bibliography:

Essential reading:

McCallum, W. (2019), *How to Give Up Plastic: Simple Steps To Living Consciously On Our Blue Planet*. London: Penguin Life.

Siegle, L. (2018), *Turning the Tide on Plastic: How Humanity (And You) Can Make Our Globe Clean Again*. London: Trapeze.

Other indicative reading

Dorey, M. (2019), *No More Rubbish Excuses: How to Reduce Your Waste and Why You Must Do It Now*. London: Ebury Press.

Bradford, L. (2019), *Save The World: There Is No Planet B: Things You Can Do Right Now To Save Our Planet*. Chichester: Summersdale Publishers Ltd.

Rodgers, P. and Milton, A. (2011), *Product Design*. London: Laurence King Publishing Ltd.

Dunne, A. and Raby, F.(2014), *Speculative Everything: Design, Fiction, and Social Dreaming*. Cambridge, Mass: MIT Press.

Websites and Publications:
https://www.creativeblog.com/computer-arts-magazine
https://www.designcouncil.org.uk/
https://www.londondesignfestival.com/
https://www.creativereview.co.uk/
https://www.barbourproductsearch.info/
https://www.fabhub.io/
https://uxdesign.cc/
Autodesk: Fusion 360
https://www.solidworks.com/
https://www.vectric.com/