

Module Details	
Module Title	Design for Circularity (DL)
Module Code	OIM7041-A
Academic Year	2024/5
Credits	10
School	School of Management
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Directed Study	50
Independent Study	10
Groupwork	20.5
Interactive Learning Objects	7
Online Lecture (Synchronous)	12.5

Availability	
Occurrence	Location / Period
DLA	University of Bradford / Semester 3

Module Aims
<p>In this module, participants will delve into the principles of circular design, focusing on collection, reuse, repair, and recycling. By mastering these concepts, students will gain the ability to create products and services that align with circular economy goals. Whether designing for longevity, disassembly, or material recovery, participants will develop the competence needed to drive sustainable innovation. The module also explores critical aspects such as life cycle assessment (LCA), hazardous substances, and critical materials. Participants will learn to evaluate environmental impacts across a product's life cycle and make informed decisions. Additionally, we delve into circular economy regulations (including REACH, RoHS, and WEEE) and their implications for companies, managers, and designers. By combining theory with practical insights, this module equips executives to lead transformative change in their organizations</p>

Outline Syllabus

Design Strategies for Circularity (Design for X): Focused on circular principles, including end-of-life considerations. Techniques for designing products that can be easily disassembled, repaired, and repurposed.

Navigating Commodity Prices and Emerging Materials: Analysing commodity markets, with a spotlight on renewable energies. Understanding how material costs impact circular design decisions.

Life Cycle Assessment (LCA): Evaluating environmental impacts across a product's entire life cycle. Balancing economic, environmental, and social factors.

Managing Hazardous Substances and Critical Materials: How toxic elements influence design choices. Mitigating risks while maintaining product performance.

Regulatory Landscape in Circular Economy (CE): Deep dive into regulations such as REACH, RoHS, Eco-Design, and WEEE. Implications for companies, managers, and designers.

Learning Outcomes

Outcome Number	Description
01	Review and evaluate key concepts, principles and business issues around resources, energy and materials and competitive advantage at different scales.
02	Demonstrate the role and importance of concepts such as cascades, green chemistry, commodity prices, metrics on business case outcomes within the design process at different scales.
03	Critically appraise a circular economy case study from a resources, energy and materials perspective.
04	Clearly communicate the findings from a circular economy a case study focused on resources, materials and energy.

Learning, Teaching and Assessment Strategy

Learners will engage in learning through a series of directed study activities and online tutorials, and textbook readings, supported by audio recordings. Tutorials and PowerPoint slides will introduce important concepts. Structured tutorial exercises will provide you with the opportunity to develop your understanding of key concepts and ideas. Online tutorial sessions will enable you to engage in debate with your peers and tutor about important ideas and contemporary business problems.

Learning objectives 1 to 4 will be assessed by a single written assignment.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Individual assignment (2000 words)	100%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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