



Introduction to Circular Economy

This course looks at where important materials in products we use daily come from and how these materials can be used more efficiently, longer, and in closed loops. This is the aim of the Circular Economy, but it doesn't happen on its own. It results from choices and strategies by suppliers, designers, businesses, policymakers, and consumers.

Who Should Attend

This course benefits a wide range of individuals across various sectors interested in understanding and implementing circular economy principles. This course would be valuable for manufacturing, supply chain management, waste management, sustainability, environmental management, and policy-making professionals. Entrepreneurs and business owners looking to transition to circular business models can also benefit from attending this course. Additionally, individuals involved in research, consultancy, and education related to sustainability and resource management would find value in gaining a foundational understanding of the circular economy. This course suits anyone seeking to explore and contribute to the transition towards a more sustainable and circular economic system.

Aims

This course will equip professionals with an appreciation of the urgent requirement to transition to a more sustainable industrial system brought about by adopting a circular economy approach. It will provide an understanding of the risks to industry and society of continued pursuit of linear models of operation and the advantages presented by transitioning towards circular operating models. Finally, it will convey an understanding of the nature of necessary changes within organisations and the knowledge, tools and strategies to achieve this within organisations practically.

Learning Outcomes

On successful completion of this module, a student should be able to:

- Demonstrate a systematic understanding of the key principles, benefits, challenges and underlying philosophy associated with a circular economy model and critically evaluate the economic, environmental, social and organisational impact of implementing aspects of the circular economy within your own business and across industrial sectors.

- Design and evaluate novel solutions of circular activity within a business context and wider ecosystem, and construct a comprehensive business case and implementation strategy for the application. Systematically appraise methods by which the transition towards a circular economy can be effectively managed and reflect on your role as a change-maker within that process.

Course Programme

Overview of CE

- Overview of Circular Economy and sustainable development
- Critical Raw Materials (CRMs) and Resource Scarcity
- Policy Legislation and Strategy
- Major players in the UK – Assisting and facilitating change
- Circular Business Models and the Shifting Role of Departments to accommodate circularity
- Early movers in CE and business benefits

Practical solutions and tools to help transition to a circular economy

- Lean Manufacturing and Industry 4.0
- Measuring Environmental Impact & Systems Thinking
- Lifecycle Analysis
- Systems thinking

Eco-design and design for circular economy

- Lifecycle optimisation
- Materials Circularity Indicators
- Pipeline alternative recovery technologies
- Wrap-up and feedback on assessments

Course Delivery

The course is conveniently delivered through Swansea University's Learning Management System, Canvas, providing a seamless online learning experience. Students are granted a generous three-month period to complete the course, allowing for personalised learning at their own preferred pace.

Throughout the course, participants will engage in three progressive assessment quizzes, complemented by a comprehensive final written assessment that culminates their learning journey. All assessments are conveniently submitted through the secure and user-friendly platform, Canvas.

To ensure a supportive and enriching learning environment, expert guidance and assistance are readily available from our project lecturers and dedicated learning technologists. These experienced professionals can be easily reached through Canvas or via email.

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