

## Liverpool John Moores University

Title: SUSTAINABLE DEVELOPMENT  
Status: Definitive  
Code: **4015TECH** (105284)  
Version Start Date: 01-08-2011

Owning School/Faculty: Engineering  
Teaching School/Faculty: Engineering

Team	Leader
Andrew Cunningham	Y

**Academic Level:** FHEQ4  
**Credit Value:** 24.00  
**Total Delivered Hours:** 72.00  
**Total Learning Hours:** 240  
**Private Study:** 168

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	60.000
Off Site	12.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Sustainable Development Investigation	50.0	
Essay	AS2	Life Cycle Assessment	50.0	

### Aims

*The aim of this module is to show the students the impact that humans have on their environment and the need for sustainable development. It will provide the opportunity to develop the knowledge, values, and skills to participate in decisions about the way we do things, individually and collectively, both locally and globally, that will improve the quality of life now and without damaging the planet for the future.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Define the principle concepts of sustainable development.
- 2 identify and critically evaluate the legislative drivers of sustainable development.
- 3 identify and review the key local, national, and international pressure groups and governing bodies.
- 4 undertake a life-cycle assessment on a typical consumer product.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

CW	1	2	3
CW	1	4	

## Outline Syllabus

*Definition of sustainable development (SD); history and development of sustainable development; legislative drivers; waste electrical and electronic equipment (WEEE); Restriction of hazardous substances (RoHS) directive; End of life vehicles (EOL); Eco-design; the systems approach; life cycle assessment; regional and global impact categories; Reduction of consumption and production; The impact of humans on the environment / nature and the need for sustainable development. Knowledge of population / resource. Natural resource protection and environmental enhancement. Wellbeing. The global market and third world countries; Climate change and the global environment. Pollution of land, sea and air. Recycling and global warming. carbon dioxide emissions; increasing products function and value; introduction to ISO14001 Environmental Management System; issues and limitations of sustainable developments; the role of local, national and international sustainable communities, pressure groups, governing bodies and political parties.*

## Learning Activities

A range of structured lectures with student centred learning activities including local and global case studies. Students will be expected to partake in a number of local field trips.

## References

<b>Course Material</b>	Book
<b>Author</b>	Simon Dresner
<b>Publishing Year</b>	2002

<b>Title</b>	The Principles of Sustainability
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Earthscan Publications Ltd
<b>ISBN</b>	10: 185383842X

<b>Course Material</b>	Book
<b>Author</b>	Jennifer A. Elliott
<b>Publishing Year</b>	2005
<b>Title</b>	Introduction to Sustainable Development
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Routledge
<b>ISBN</b>	10: 0415335590

<b>Course Material</b>	Book
<b>Author</b>	Christopher J. Barrow
<b>Publishing Year</b>	2006
<b>Title</b>	Environmental Management for Sustainable Development
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Routledge
<b>ISBN</b>	10: 041536535X

<b>Course Material</b>	Book
<b>Author</b>	Karel Mulder
<b>Publishing Year</b>	2006
<b>Title</b>	Sustainable Development for Engineers
<b>Subtitle</b>	A Handbook and Resource Guide
<b>Edition</b>	
<b>Publisher</b>	Greenleaf Publishing
<b>ISBN</b>	10: 1874719195

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## Notes

This module sets the overall scene of the programme and places the programme modules into context. Field trips to local places of interest and relevance will be arranged.