

BNM814 GREEN INFORMATION AND OPERATIONS MANAGEMENT

Number of Aston Credits:	15
Number of ECTS Credits:	7.5

Staff Member Responsible for the Module:

Dr. Christopher Brewster, Operations and Information Management Group,
ABS Building, Room ABS 275, Extension 3233

Availability: See 'office hours'

Or contact the Operations and Information Management Group Administrator:
Mr. John Morley, Room ABS 266, Extension 3236

Pre-requisites for the Module:

Module available on MSc Social Responsibility and Sustainability.

Mode of Attendance:

A combination of lectures, practical exercises, and individual study.



Module Objectives and Learning Outcomes:

To teach students about the role and impact of ICT systems and how they affect the environment, and how they are affected by environmental and sustainability concerns.

To make students aware of the role information, information and knowledge management, and decision support systems can play in understanding environmental and social impacts of organizational decisions.

To investigate in a creative manner the potential for positive social and environmental impacts from the use of ICT.

To teach students the fundamentals of green and sustainable supply chains and logistics management with respect to a range of environmental and social criteria.

To provide students with a set of skills to enable their understanding of the global interconnectivity of product supply, manufacturing, and transportation.

To enable students to critically discuss models and data and develop the conceptual skills to look at the wider picture in time, space, environmental and social structures.

Knowledge and Understanding

Theoretical and applied perspectives of ICT and operations management.

Understanding of social political, economic and environmental context, locally, nationally and globally.

Intellectual Skills

The ability to think, sometimes laterally, about the significant of ICT and Operations in an organisation's decisions and the environmental and wider impact of those choices.

Specifically skills of analysis, synthesis, critical reasoning and evaluation, together with problem solving and decision making skills.





Professional/Subject Specific Skills

This is a module planned for a cross disciplinary degree. The students will acquire skills related to ICT management and planning, operations management and planning and the ability to think in a systematic manner.

Transferable Skills

All the skills will be highly transferable because ICT and Operations are relevant to a very large number of roles across many types of organisations. These include IT & computing skills, research skills, communication skills and the ability to apply and integrate key skills and competencies to the workplace.

Module Content:

Week 1	Measurement, Information and Knowledge for Sustainability
Week 2	ICT & IS - Impacts
Week 3	ICT & IS – Solutions
Week 4	Introduction to Green Supply Chain
Week 5	Introduction to Green Operations
Week 6	Green Operations – 2
Week 7	Green Supply Chain Management 2
Week 8	Waste and the Food System
Week 9	Panel Discussion/ Debate. Revision Week
Week 10	Assessment

Corporate Connections:





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The instructors have a number of contacts in relevant companies and industries. Students will be exposed 1-2 invited speakers during the module to reinforce the relevance of topics addressed.

International Dimensions:

The topic is highly international in scope. All topics discussed have international implications and dependencies. Examples will be used throughout the lectures showing the international consequences of Green ICT and Operations.

Contribution of Research:

All faculty involved in this module currently undertake research relevant to this topic and bring elements of this into the teaching. For further current details consult the research projects listed on individual instructors web pages.

Method of Assessment and Feedback:

Feedback: This will be given to students on completion of in-class and individual work.

Assessment: Two components consisting of an individual presentation on a topic to be given by each student, and an individual project on a topic agreed with the instructors.



For further information on any of the opportunities that Aston Business School offers, please contact:

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Learning Hours:

Contact hours	30
Directed learning – Exercises	90
Further Private Study	30
Total	150

Essential Reading:

San Murugesan, "Harnessing Green IT: Principles and Practices," IEEE IT Professional, January–February 2008

Greenpeace Guide to Greener Electronics 2010

O'Neill, Mark, Green IT for Sustainable Business Practice, 2010

Stephen Ruth, "Green IT ," IEEE Internet Computing, pp. 74-78, July/August, 2009

Other Reading:

The topic is cross disciplinary and relatively innovative so a number of readings from academic and non academic sources will be used by the instructors.

Breno Nunes, David Bennett, (2010) "Green operations initiatives in the automotive industry: An environmental reports analysis and benchmarking study", Benchmarking: An International Journal, Vol. 17 Iss: 3, pp.396 – 420

Kirk W. Cameron, "Trading in Green IT," Computer, pp. 83-85, March, 2010

Kleindorfer, P. R., Singhal, K. and Van Wassenhove, L. N. (2005), "Sustainable Operations Management", Production and Operations Management, Vol. 14, No. 4, pp. 482-492.

Kounatze, Christian Reimsbach, Towards Green ICT Strategies: Assessing Policies and Programmes on ICT and the Environment, OECD, 2010

Nidumolu, Prahalad and Rangaswami (2009) Why sustainability is now the key driver of innovation, Harvard Business Review.





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Tristram Stuart, Waste: Uncovering the Global Food Scandal. Penguin. 2009



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