Liverpool John Moores University

Title:	GREEN AND SUSTAINABLE COMPUTING
Status:	Definitive
Code:	**6523YCOM** (118253)
Version Start Date:	01-08-2016

Owning School/Faculty:	Computer Science
Teaching School/Faculty:	YPC International College (Kolej Antarabangsa YPC)

Team	Leader
Mark Taylor	Y

Academic Level:	FHEQ6	**Credit Value:**	12	**Total Delivered Hours:**	36
Total Learning Hours:	120	**Private Study:**	84		

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12
Seminar	12
Tutorial	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Research and design of real-life practical strategies which provide sustainable computing for a specific ICT requirement.	100	

Aims

To provide an in-depth study of the issues and concepts surrounding green and sustainable computing.
To develop an understanding of the theory and practices of developing green and sustainable computing systems and practices.
To develop an understanding of the fundamental technical concepts to develop,

implement, monitor and control an organizational strategy to achieve green objectives.

Learning Outcomes

After completing the module the student should be able to:

1   Critically evaluate the environmental impact of ICT and how organisations can streamline their systems, increase sustainability and save energy costs.
2   Critically review and identify the fundamental technical requirements of green ICT technologies.
3   Apply creative skills in the design of real-life practical strategies which provide sustainable computing for the future.

Learning Outcomes of Assessments

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

| Research and development | 1 | 2 | 3 |

Outline Syllabus

Developing Green IT Strategies:
Developing awareness of factors and issues which are present in a particular organizational setting.
Generate a set of objectives for a green ICT strategy.
Developing a green ICT strategy and implementation plan with appropriate mechanisms for control.

Green Computing Technologies:
Investigating and identifying available technologies which could reduce the impact on the environment within an organization, from an information and communications technology (ICT) perspective.

ICT and the Environment:
Identifying and assessing key environmental issues over wise range aspects of an organisation's operation, from ICT perspective.

Ethics and ICT:
Focusing on social, ethical, legal and legislative issues relevant to the green business agenda, including the EU directive (WEEE). The idea is to help to develop a set of professional ethics to help in a constantly changing environment.

Sustainable Computing:
Dealing with the environmental impact of ICT equipment thought their life cycle from their production, use and eventual disposal or recycling.
Issues relating to cost and impact production and an environmental business model are covered.

Learning Activities

Learning activities will be through lectures, tutorials and seminar/group work where students will be encouraged to ask questions and discuss case studies and do research and reflection on the subject area.

Notes

The course will provide an in-depth study of the issues and concepts surrounding green and sustainable computing. It will provide the fundamental technical concepts that help the student to understand the theory and practices of developing green and sustainable computing systems and the fundamental technical concepts to develop, implement, monitor and control an organizational strategy to achieve green objectives.