Liverpool John Moores University

Title:	GREEN TECHNOLOGY WORKSHOP
Status:	Definitive
Code:	**5006TECH** (105296)
Version Start Date:	01-08-2016
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
Adam Papworth	Y

Academic Level:	FHEQ5	**Credit Value:**	24	**Total Delivered Hours:**	112
Total Learning Hours:	240	**Private Study:**	128		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Practical	88

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Initial project plan	10	
Essay	AS2	Presentation of design concepts	15	
Essay	AS3	Final design poster presentation	15	
Essay	AS4	Report on final design and calculations	30	
Essay	AS5	Prototype demonstration/ testing	30	

Aims

This module provides an integrating activity that will give students the opportunity to combine their knowledge and understanding of technology and environmental issues with the skills to design / redesign engineered systems. It will allow students to fully

appreciate the impact of design decisions made during a typical technical project.

Learning Outcomes

After completing the module the student should be able to:

1	Work in a team environment and demonstrate appropriate communication skills.
2	Appreciate the multi-disciplinary aspects of design.
3	Apply a coherent approach to a problem solving activity.
4	Apply appropriate design analysis, materials and component selection.
5	construct and test a prototype.

Learning Outcomes of Assessments

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

CW	1			
CW	1	2	3	4
CW	1	2		
CW	1	3	4	
CW	5			

Outline Syllabus

Application of planning processes in design and build environmental project working as a team.
Application of appriopriate design analysis techniques.
Materials selection for form and function.
Component selection and interfacing.
Commissioning and performance testing of a simple engineering system.

Learning Activities

A series of lectures and practical sessions held in a workshop environment covering areas of environmentally responsible technology. This will culminate in a structured design week, in both semesters, where students will focus on the development of their design project.

Notes

This module aims to provide the student with a broad view of multi-disciplinary engineering problem solving. The module is based mainly on practical work

undertaken in building a working prototype. The prototype system will incorporate a wide range of technologies and will be required to undertake specific functions. Development of the prototype will require the applcation of engineering knowledge acquired in other modules. The project will be undertaken in teams so as to develop the students team working and communication skills. The project will focus on an area of environmental concern or significance.
Typical projects may be in the areas of the use of recycled materials; design for disassembly and re-use; lightweighting and total life-cycle environmental assessment. This will culminate in a structured design week, in both semesters, where students will focus on the development of their design project.