Liverpool John Moores University

Title: Energy Management
Status: Definitive
Code: **6507ENGSBC**   (119420)
Version Start Date: 01-08-2016

Owning School/Faculty: Maritime and Mechanical Engineering
Teaching School/Faculty: The Sino-British College

Team	Leader
Russell English	Y

Academic Level:	FHEQ6	**Credit Value:**	12	**Total Delivered Hours:**	37
Total Learning Hours:	120	**Private Study:**	83		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	20
Tutorial	15

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Investigat		30	
Exam	exam		70	2

Aims

This module will allow students to use their engineering knowledge to optimize energy usage in manufacturing and process industries.

Learning Outcomes

After completing the module the student should be able to:

1	Estimate the energy consumption in process and manufacturing Industries
2	Specify process and manufacturing systems for effective use of energy
3	Model, simulate and optimize control of energy use in systems
4	Evaluate future technologies and materials, and identify their potential to reduce energy usage

Learning Outcomes of Assessments

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

Energy Management	3		
2 hours; 3 from 5 questions	1	2	4

Outline Syllabus

Estimate energy consumption based on specific energies of processes.
Product-price and cost modelling for manufacturing; including evaluation of energy saving devices.
MatLab modeling, simulation and control of processes for optimal energy use.
Product design and evaluation of materials for minimum energy usage.

Learning Activities

Delivered with a range of lectures, tutorials and case studies

Notes

This module will allow students to use their engineering knowledge to optimize energy usage in manufacturing and process industries.