

Liverpool John Moores University

Title: SPORTS PRODUCT DESIGN
Status: Definitive
Code: **6008TECH** (105325)
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: FHEQ6
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	Group Reverse Engineering Sports Product Project	40	
Essay	AS2	Group Leading Sports Design Project	60	

Aims

This module covers the latest sports product design and technology issues and the methods that are driving the optimisation of sports performance.

Learning Outcomes

After completing the module the student should be able to:

- 1 Design a sports product that balances both its aesthetic and ergonomic form with its functionality and performance to produce a desirable product.
- 2 Design a sports product that maximises sports performance by its form, method and use of modern materials.

Learning Outcomes of Assessments

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

CW	1	2
CW	1	2

Outline Syllabus

General:

Types of design; reverse engineering and re-design; the design process; design research / needs recognition; design management; problem definition stage; problem statement; design brief; design specifications / BS7373; ideation loop; design scheme selection; embodiment design; product configuration and architecture; make / buy decisions; material selection; design for manufacture / assembly; design for plastic injection moulding, casting, machining and fabrication.

Design Ethics:

Principles of good design; user centred design; inclusive design; design for security; sustainable design.

Form Design:

Human factors / ergonomics; aesthetics; branding and styling; customerisation; emotional / experience design.

Learning Activities

This module will be taught with a series of lectures and practical design sessions. Case studies of modern examples of good design will be used to inspire the students. 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 allows students to explore and investigate some of the most important and relevant aspects of sports product design. It also allows the students some freedom to choose an area of sports product design that is of particular interest to the group involved. This will culminate in a structured design week, in both semesters, where students will focus on the development of their design project.

