

Liverpool John Moores University

Title: Subject Pedagogy in Physics
Status: Definitive
Code: **6001ITT** (123259)
Version Start Date: 01-08-2020

Owning School/Faculty: Education
Teaching School/Faculty: Education

Team	Leader
Kenneth Clays	Y

Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 40
Total Learning Hours: 200 **Private Study:** 160

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	35
Tutorial	2
Workshop	3

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	Chapter	3000 words	80	
Presentation	Present	1000 words equivalence	20	

Aims

To enable you to have a critical understanding of the nature of physics education;
To enable you to analyse how physics is taught in the 11-18 sector;
To enable you to investigate the development of learners' understanding and barriers to learning in physics;
To enable you to critically evaluate strategies to enable learning in physics;

Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse and synthesise scientific knowledge in relation to learning, teaching and assessment in physics.
- 2 Critically reflect on the science curriculum.
- 3 Review evidence to evaluate potential impact on learning and progress in physics.

Learning Outcomes of Assessments

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

Produce a book chapter 1 3

Overview of book chapter 1 2

Outline Syllabus

Effective learning in Science within the 11-18 sector:

- *The National Curriculum and frameworks and initiatives relating to physics in the 11-18 sector;*
- *Approaches to pedagogy in physics;*
- *Current research and policies on learning, teaching and assessment applicable to physics in the 11-18 sector;*
- *Strategies/activities to use ICT to enhance teaching and learning in physics;*
- *Effective learning within physics;*
- *Issues in development of learning in secondary learners with reference to physics;*
- *Strategies for investigating and critically evaluating research literature;*
- *Design a teaching resource for physics;*

Learning Activities

- Key theoretical/policy perspectives, along with an overview of learner development and individual needs;
- Lectures and workshops will provide opportunities to evaluate learning, teaching and assessment activities within physics.
- Support will be provided to enable students to develop their critical, analytical and evaluative skills in relation to their own approaches to learning, teaching and assessment within physics and to review subject focused literature;
- Online resources will support and enhance student learning and engagement;

Notes

This module aims to equip participants with an understanding of the physics

curriculum in England and approaches to learning, teaching and assessment in physics. Students will explore and aspect of physics and design a book chapter aimed at key stage 4 learners (14-16).