

Warning: An incomplete or missing proforma may have resulted from system verification processing

Title: PROBLEM SOLVING  
 Status: Definitive  
 Code: **5115EDSTUD** (117573)  
 Version Start Date: 01-08-2018  
 Owing School/Faculty: Education  
 Teaching School/Faculty: Education

Team	Leader
Mark Meadows	Y
Clara Kassem	

**Academic Level:** FHEQ5      **Credit Value:** 24      **Total Delivered Hours:** 48  
**Total Learning Hours:** 240      **Private Study:** 192

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	20
Seminar	28

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Written solutions: Portfolio of problems selected in consultation between student and tutors for independent research and solution	80	
Presentation	AS2	Viva voce exam: where student demonstrates an understanding of several solutions selected by the tutors from the portfolio	20	

### Aims

*This module will enable students to develop their problem solving skills; use explicit strategies for solving mathematical problems. It will draw together mathematical and reasoning techniques to explore open ended problems and the connections between different areas of mathematics*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Understand and apply a wider range of problem solving techniques, with appreciation of the limitations of some techniques, the need to validate and revise models and the usefulness of applying ideas and techniques from different areas of mathematics to solving problems.
- 2 Employ appropriate mathematical models to find exact or approximate solutions to a variety of problems and present these in formal written mathematics
- 3 Employ appropriate mathematical models to find exact or approximate solutions to a variety of problems and present these coherently with appropriate rigour in oral presentation

## **Learning Outcomes of Assessments**

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

Assignment 2	1	2
Assignment 1	3	

## **Outline Syllabus**

*Problem solving techniques*

*Communicating solutions*

*Mathematical content will vary based on the problems each student chooses to tackle, but will always encourage more flexible thinking and lack of compartmentalisation of knowledge and techniques.*

## **Learning Activities**

Mathematical problems will be explored in workshops backed up by tasks for independent learning. These will use a mix of media e.g. web-based materials including video tutorials and on-line practice exercises, practical activities using ICT.

## **Notes**

Optional course for Mathematics and Education Studies