

## Liverpool John Moores University

Title: Linear Algebra  
Status: Definitive  
Code: **4233EDSTUD** (122796)  
Version Start Date: 01-08-2018

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

Team	Leader
Amir Asghari	Y

**Academic Level:** FHEQ4  
**Credit Value:** 20  
**Total Delivered Hours:** 42  
**Total Learning Hours:** 200  
**Private Study:** 158

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	20
Seminar	6
Workshop	14

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio: 2500 words equivalent	50	
Exam	AS2	Exam	50	2

### Aims

*This module aims to familiarise students with the concepts of linear algebra, basing them on a foundation of reflecting on their own prior learning and how these concepts are used, understood and misunderstood in schools and the wider world.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Reflect on ways in which linear algebra and related concepts are learned, used and understood
- 2 Model problems using systems of linear algebraic equations and solve them using a variety of methods
- 3 Understand the connection between different methods of solution of linear algebra problems

### **Learning Outcomes of Assessments**

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

Portfolio	1	2	3
Exam	1	2	3

### **Outline Syllabus**

*Algebraic concepts in school and college mathematics*  
*Errors and misconceptions in algebra*  
*Basic solutions of systems of linear equations*  
*Matrices and their applications to linear algebra*  
*Eigenvalues, eigenvectors and their interpretation*

### **Learning Activities**

Lectures, seminars, workshops, guided reading, online tasks, independent study

### **Notes**

Students will be expected to engage with the learning on this module in a reflective manner: their understanding of how linear algebra is learned in schools and, specifically, how they have learned the concepts will inform how they engage with the more advanced ideas introduced in the module.