Liverpool John Moores University

Title: Algebra
Status: Definitive
Code: **6231EDSTUD** (122960)
Version Start Date: 01-08-2018

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

Team	Leader
Amir Asghari	Y

Academic Level: FHEQ6   **Credit Value:** 20   **Total Delivered Hours:** 42

Total Learning Hours: 200   **Private Study:** 158

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	20
Workshop	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio (equivalent of 2500 words): Proofs and applications of axioms	50	
Exam	AS2	Exam	50	2

Aims

This module formalises the concepts of axiomatic systems and proofs from axioms, specifically in the context of algebras.

Learning Outcomes

After completing the module the student should be able to:

1   Apply ideas of axiomatic mathematics in the context of algebraic structures
2   Critically analyse linear algebra and number theory as examples of algebraic structures

Learning Outcomes of Assessments

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

Portfolio   1   2

Exam   1   2

Outline Syllabus

Working with axiomatic systems
Groups, rings and fields
How linear algebra and number theory fit these frameworks
Examples and applications

Learning Activities

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

Notes

The more advanced abstract ideas introduced in this module are illustrated using the examples encountered in 4233EDSTUD Linear Algebra and 5231EDSTUD Number Theory, and further examples and applications of the concepts of rings, groups, fields and other algebraic structures are explored.