

LTCC Basic Course

Title: Representation Theory of Finite Groups

Basic Details:

- Core Audience: 1st yr, pure
- Course Format: **Extended:** 5 x 2hr lectures

Course Description:

- Keywords: algebras, modules, representations, characters
- Syllabus: algebras, modules, submodules, homomorphisms, ideals, quotients, semisimplicity, characters, Maschke's theorem, orthogonality of characters, decompositions of tensor products, induced representations, Frobenius reciprocity, representations of the symmetric group, Frobenius character formula
- Recommended reading: *Introduction to representation theory* - Etingof et al.
- Additional optional reading: *Linear Representations of Finite Groups* - Serre
The Symmetric Group – Sagan
- Prerequisites: group theory, ring theory, linear algebra

Format:

- Five discussion/problem sheets
- Electronic lecture notes will be provided

Lecturer Details:

- Lecturer: Yusra Naqvi
- Lecturer home institution: UCL
- Lecturer e-mail: y.naqvi@ucl.ac.uk