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Representations of Groups

The course is devoted to the classical theory of characters of finite groups and their applications to the theory of linear representations.

by James & M. Liebeck (Cambridge University Press)

Prerequisite:  MATH-310 or 314* or permission of the instructor.

Instructor:  D. Pollack

Evaluation:
- Examination  30%
- Mid-term test  20%
- Exercises  50%

Outline:
- Reducible and irreducible representations
- The character of a representation
- Schur’s Lemma
- Orthogonality relations for characters
- Decomposition of the regular representation
- Canonical decomposition of a representation
- Representations of abelian groups
- Tensor product of two representations
- Symmetric square and alternating square
- Group algebra. Representations and modules
- Induced representations
- The character of an induced representation