

Unique factorization domains and Euclidean domains

15 Hrs Unique factorization domains-Principal ideal domains-Euclidean domains-Polynomial rings over UFD (Sections 11.1 to 11.4 of the Chapter 11 in the Prescribed Text Book.)

UNIT IV Modules and Vector Spaces

15 Hrs Definition and examples – Submodules and direct sums – R-homomorphisms and quotient modules (Sections 1,2 & 3 of Chapter - 14)

UNIT V Free Modules

15 Hrs

Completely reducible modules – Free modules – Representation of linear mappings – Rank of linear mapping (Sections 4 to 7 of Chapter - 14)

Activities:

1. Assignments
2. Student Seminars and Guest Lecturers
3. Problem Solving Sessions

Text Book :

Basic Abstract Algebra by P.B.Battacharya, S.K.jain, S.R.Nagpaul, Cambridge University Press, 1995.

Reference Books:

1. Topics in Algebra : I. N. Herstein, 2nd Edition, John Wiley & Sons
2. Algebra : Thomas W. Hungerford, Springer
3. Algebra : Serge Lang, Revised Third Edition, Springer