NPTEL Video Course - Mathematics - NOC:Commutative Algebra

Subject Co-ordinator - Prof. Dilip P. Patil

Co-ordinating Institute - IIT - Bombay

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 30 - Dimension Theorem (Continued...)
Lecture 31 - Consequences of Dimension Theorem
Lecture 32 - Generalized KrullÃ¢â ¬â ¢s Principal Ideal Theorem
Lecture 33 - Second proof of KrullÃ¢â ¬â ¢s Principal Ideal Theorem
Lecture 34 - The Spec Functor
Lecture 35 - Prime ideals in Polynomial rings
Lecture 36 - Characterization of Equidimensional Affine Algebra
Lecture 37 - Connection between Regular local rings and associated graded rings
Lecture 38 - Statement of the Jacobian Criterion for Regularity
Lecture 39 - Hilbert function for Affine Algebra
Lecture 40 - Hilbert Serre Theorem
Lecture 41 - Jacobian Matrix and its Rank
Lecture 42 - Jacobian Matrix and its Rank (Continued...)
Lecture 43 - Proof of Jacobian Critrerion
Lecture 44 - Proof of Jacobian Critrerion (Continued...)
Lecture 45 - Preparation for Homological Dimension
Lecture 46 - Complexes of Modules and Homology
Lecture 47 - Projective Modules
Lecture 48 - Homological Dimension and Projective module
Lecture 49 - Global Dimension
Lecture 50 - Homological characterization of Regular Local Rings (RLR)
Lecture 51 - Homological characterization of Regular Local Rings (Continued...)
Lecture 52 - Homological Characterization of Regular Local Rings (Continued...)
Lecture 53 - Regular Local Rings are UFD
Lecture 54 - RLR-Prime ideals of height 1
Lecture 55 - Discrete Valuation Ring
Lecture 56 - Discrete Valuation Ring (Continued...)
Lecture 57 - Dedekind Domains
Lecture 58 - Fractionary Ideals and Dedekind Domains
Lecture 59 - Characterization of Dedekind Domain
Lecture 60 - Dedekind Domains and prime factorization of ideals