

Sx-S. 623

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2003-2004 AB

Andhra University  
Department of Mathematics

M.Sc Mathematics

IV Semester - Special Paper

Syllabus

M 404 COMMUTATIVE ALGEBRA II

(prerequisite: M 304 Commutative Algebra - I)

#### UNIT I

Integral dependence, the going-up theorem - Integrally closed integral domains, the going - down theorem, valuation rings.

#### UNIT II

Chain conditions

#### UNIT III

Noetherian rings - Primary decomposition of Noetherian rings, Artin rings

#### UNIT IV

Discrete valuation rings, Dedekind domains, Fractional ideals

Content and extent of chapters 5 to 9 of the prescribed textbook.

Prescribed text book: Introduction to commutative algebra by  
M.F. Atiyah and I.G. Macdonald, Addison-Wesley publishing company,  
London