

**MA 312 Commutative Algebra / Jan–April 2020**

(BS, Int PhD, and PhD Programmes)

Download from : [http://www.math.iisc.ernet.in/patil/courses/Current Courses/...](http://www.math.iisc.ernet.in/patil/courses/Current%20Courses/...)

Tel : +91-(0)80-2293 3212/09449076304

E-mails : [patil@math.iisc.ernet.in](mailto:patil@math.iisc.ernet.in)**Course Announcement**

This course is open to all students/faculty who are interested in learning the basics of **Commutative Algebra**. The main aim of this course is the study of commutative noetherian rings, particularly, polynomial and power series rings with coefficients in the ring of integers or fields, and their quotient rings.

Starting with a short recapitulation of the basic facts of Rings, Ideals, Modules and Algebras, some classical as well as modern material will be covered. The focus of the lectures will be on motivating examples, concepts and results which emerged from the two main sources Algebraic Number Theory and Algebraic Geometry. The emphasis will be given to motivate the development of important concepts using as many examples as possible. These examples will range from routine to fairly sophisticated theoretical ones.

**Efforts will be made to keep the required prerequisites as low as possible.** However, some exposure to Linear Algebra/Algebra/Topology will be helpful.

**Proposed Time-table**

Day/Date	Time	Venue
<b>Tuesday</b>	15:30 to 17:00	LH-5 / LH-1 Department of Mathematics
<b>Thursday</b>	15:30 to 17:00	LH-5 / LH-1 Department of Mathematics

For participation in this course please contact the Instructor either in person or by e-mail. The first lecture will be on **Thursday, January 02, 2020 in LH-5**.

**Instructor**

Dilip P. Patil