SUBJECT: Algebra	
COURSE NAME: Bsc Hons MATHEMATICS	
SEMESTER : 1	

WEEK	TOPIC(S)	TEACHING METHODOLOGY ADOPTED/CONTINUOUS INTERNAL EVALUATION
1-4	Polynomials, The remainder and factor theorem, Synthetic division, Factored form of a polynomial, Multiple roots, Fundamental theorem of algebra, Relations between the roots and the coefficients of polynomial equations, Upper bounds for the real roots, Results on imaginary, integral and rational roots, Newton's method for integral roots, Descartes' rule of signs.	Class assignment and quiz
5-6	Polar representation of complex numbers, De-Moivre's theorem for integer and rational indices and their applications, The nth roots of unity, Cardan's solution of the cubic, Descartes' solution of the quartic equation	Ppt on different topics and class test
7-8	Statement of well ordering principle. The division algorithm in $\mathbb{Z}$, Divisibility and the Euclidean algorithm.	Mcqs
9-10	Fundamental theorem of arithmetic, Modular arithmetic and basic properties of congruences.	Ppt and class assignment

11-13	Groups, Basic properties, Symmetries of a square, Dihedral group, Order of a group, Order of an element, Subgroups, Center of a group, Centralizer of an element.	Class test and quiz
14-15	Cyclic groups and properties, Generators of a cyclic group, Classification of subgroups of cyclic groups	Test and ppt presentations