Foundation of mathematics II

Code: MATH1204

1st stage

Assistant Lecturer: Nibras Yasir Khdair

Reference: Lal, R. (2017). Algebra 1: Groups, rings, fields and arithmetic. Springer.

Chapter One –Functions

Mapping, domain, co-domain, range, image, composite, identity map, surjective, injective, bijective, inverse, inverse image, direct image.

Chapter Two –Ordering

Partial order and total order, Upper bound, minimal element, Lower bound, Least upper bound, Greatest lower bound, Complete sets, Well-ordered set .

Chapter Three– Basic Concepts in Group Theory

Binary Operation, groupoid, associative operation, commutative operation, identity element and inverse, Basic definitions, Groups, Commutative group, Subgroup, Order of group, semigroup, commutative semigroup.