



The Graduate Center of CUNY Ph.D. Program  
in Mathematics  
Course Description -Spring 2021

Course Title: Algebra I

Course #: MATH 70600

Day & Time: Tuesday-Thursday 9:30-11

Instructor Name: Benjamin Steinberg

Contact Information: bsteinberg@ccny.cuny.edu

Pre-Requisites: MATH 705

Office Hours: TBA

Description:

This course will focus on the parts of the standard algebra curriculum not covered in the first semester such as module theory, including tensor products, free modules, projective modules and flat modules. We will then cover vector spaces and modules over PIDs with applications to abelian groups and linear algebra. We will then cover elements of the representation theory of finite groups including Wedderburn-Artin theory, character theory and applications to finite group theory.