The Department of Mathematics  
2021–22–A term

**Course Name**  Introduction to Commutative Algebra  
**Course Number**  201.1.7071  
**Course web page**  [https://www.math.bgu.ac.il//en/teaching/fall2022/courses/intro-comm-algebra](https://www.math.bgu.ac.il//en/teaching/fall2022/courses/intro-comm-algebra)  
**Lecturer**  Prof. Eitan Sayag, <sayage@bgu.ac.il>, Office 107  
**Office Hours**  [https://www.math.bgu.ac.il/en/teaching/hours](https://www.math.bgu.ac.il/en/teaching/hours)

**Abstract**

**Requirements and grading**

**Course topics**

1. Rings and ideals (revisited and expanded).
3. Noetherian rings and modules over them.
4. Hilbert’s basis theorem.
5. Finitely generated modules over PID.
6. Hilbert’s Nullstellensatz.
7. Affine varieties.
8. Prime ideals and localization. Primary decomposition.

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1Information may change during the first two weeks of the term. Please consult the webpage for updates