

**Homework-2 for Math 431**

**Due Date: 8 April 2022 Friday**

Show that the degree of the Hilbert polynomial of a projective variety of dimension  $d$  is also  $d$ . There are several proofs of this on Internet and in several books written with different tastes. Study them and write your own solution.

Write your solutions on A4 papers and staple them together. Do not use other fancy covers!

Thank you.