



Bilkent University

Take-Home Exam # 01
Math 633 Algebraic Geometry
Due on: 5 November 2019 Tuesday - Class Time
Instructor: Ali Sinan Sertöz



Name & Lastname:

Department:

Student ID:

Q-1) Let X be the projective twisted cubic in \mathbb{P}_k^3 , where k is an algebraically closed field.

- (i) Find an ideal J in $k[x, y, z, w]$, where we take $[x : y : z : w]$ as homogeneous coordinates for \mathbb{P}^3 , such that $Z(J) = X$.
- (ii) Calculate $I(X)$ in $k[x, y, z, w]$.

Solution: