

SEMINAR ON MODULI THEORY

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1. SUMMARY

One way to go through these sessions is to recall theory of schemes (at level of things in Hartshorne chapter two), by doing a beeline through all the definitions, properties, etc. However, I feel since the point of doing this exercise is to become more comfortable in working with schemes, we will just do lots of examples instead. By this, I mean we will just prove some things in very concrete situations. This will help you build a concrete picture of the generalities.

List of some things to discuss (just do lots of examples):

- (1) Definition of a scheme.
- (2) Say affine communication lemma *stress this!*
- (3) examples
 - (a) \mathbb{P}^n and its sheaf theory! This already clarifies the $\mathcal{O}(n)$'s