COMPUTER-AIDED ANALYSIS AND DESIGN MAE 292

Professor Nick Gravish

L5 Representations of curves

Logistics

- HW 2 due Thursday
- We will cover curves and cams this week

	Thurs	4/9/2020	4	CAD Assemblies	HW 2	HW 1
Week 3	Tues	4/14/2020	5	Functions in CAD; Bezier, Hermite polynomials, Lagrangian polynomials, Splines AND Introduction to motion design		
	Thurs	4/16/2020	6	Designing Cam motions and surface profiles: analytical or computational (envelopes)	HW 3	HW 2
Week 4	Tues	4/21/2020	7	Closed-chain linkages: mobility, constraint equations		

Curves

- Representations of curves
  - Parametric, explicit, implicit
- Approximate curves from data and why we need fitting
  - OLS, anscombes quartet
- Exact curves from data
  - Lagrange polynomials, Splines
- “Designed” curves
  - Polylines, Bezier curves