

Lecture #1: Thursday, 11 January 2001  
Topics: Course Outline  
Lecturer: Leonidas Guibas

## Course Outline

### January

Tue 9 No Class  
Thu 11 Homogeneous Coordinates; Transformations  
Tue 16 Affine and Projective Geometries  
Homework 1 out  
Thu 18 Quaternions  
Tue 23 Shape Modeling: Parametric and Implicit  
Thu 25 Classification of Parametric Cubics  
Tue 30 Polar Forms  
Homework 1 due; Homework 2 out

### February

Thu 1 Continuity Constraints; Splines  
Tue 6 B-Splines  
Thu 8 Rational Curves  
Tue 13 Tensor-Product and Total-Degree Surfaces I  
Homework 2 due; Homework 3 out  
Thu 15 Tensor-Product and Total-Degree Surfaces II  
Tue 20 Subdivision Surfaces I  
Thu 22 Subdivision Surfaces II

Tue 27 Triangle Meshes and Their Representation  
Homework 3 due; Project (Homework 4) out

### March

Thu 1 Mesh Simplification

Tue 6 Mesh Compression

Thu 8 Scattered Data Interpolation

Tue 13 Solid Models; BSPs and Their Uses

Thu 15 Class Summary

Fri 16 Project due

Fri 23 Final Examination