

CSCI-4962: Three-Dimensional Computer Graphics

Class 12: October 7, 2002

## **Hermite Splines, Catmull-Rom Splines, and B-Splines**

### **Today's Class**

Today we will first look at interpolating splines such as Hermite splines and Catmull-Rom Splines. We will then move on to B-Splines, which are approximating splines.

1. Interpolating spline curves
2. Hermite splines, and conversion of Hermite splines to Bezier splines
3. Catmull-Rom splines
4. B-spline curves and their properties
5. Conversion of cubic B-splines to cubic Bezier splines (see `curves.c`)
6. Non-uniform B-splines

### **Reading**

Chapters 10.5, 10.7–10.8, and 10.9.3 of the Angel textbook.  
Chapter 12 of the OpenGL red book.

### **Next Class**

NURBS.