MAE 3195, Credit Sheet 11, Tutorial Lesson 11
Sweeps and Blends

For this homework, read and work through Lesson 11 in your text *ProEngineer Tutorial*. Before you launch Pro/E, make a new sub-directory in your personal MAE3195 directory titled "HW11" and use HW11 as your working directory. When the book asks you to make a parts named "s_brack", "sprinkler", "blend1", and "blend2", name them respectively "***-s_brack", "***-sprinkler", "***-blend1", and "***-blend2" instead.

Since this is a tutorial homework, each individual must perform this work independently. You are encouraged, however, to discuss the assignment with other students as necessary.

It is recommended (but not required) that you study the "Questions for Review" and create some of the "Exercise" models at the end of the chapter. After completing the lesson, answer the following questions and bring this Credit Sheet with you to class on the due date.

Review Questions

1. On the back of this sheet, draw a 3D sketch of an example of each of the following sweeps:
   (a) closed section, open trajectory,
   (b) closed section, closed trajectory, and
   (c) open section, closed trajectory.

2. What problem may arise if the swept section is large and sweep trajectory has a small radius arc in it?

3. What happens if a sweep trajectory has discontinuities (kinks) in it rather than being composed of smooth tangential transitions?

4. When creating a blend, what is meant by the "start point" of the sketch?

5. What are the essential common characteristics of all sections in a parallel blend?