The reason I chose to make a baseball bat and tee assembly for my Personal CAD Project is because baseball has been a huge part of my life for as long as I can remember. Baseball continues to be a huge part of my college experience here Penn State. Being a part of the Penn State Baseball Club, I have the privilege to play baseball at the collegiate level and it inspired me to incorporate baseball into my final CAD project.

To produce my baseball bat and tee assembly, I used many of the techniques that I learned in class to create the multiple parts necessary for the project. I also used two variations of batting tees and combined the designs to make the tee seen in my project. For the bat (seen on the right), I used a revolve compromised of line for the base of the handle, two tangent arcs to complete the handle, a spline to make the barrel of the bat, and finally, another tangent arc to complete the end cap of the bat.

For the base of the tee (seen on the right), I lofted the plate and extruded five circles from the lofted plate to make the various positions of the tee. I then used an extruded cut of another five circles to make the holes necessary to place the tee in. Finally, I used fillets to smooth the edges of the extruded circles.
To make the part of the tee that actually holds the ball, I extruded another circle to the appropriate height followed by extruding another circle that is meant to act like the sliding part of the tee. I then filleted the edge of the first extruded circle to make the edges smooth. Finally, the top cone-shaped structure of the tee was made from a revolve of a spline (see both pictures on the right). All of the parts were then colored and textured respectively and assembled together by pairing the parts together. I then completed the pack-and-go project by making a fully-dimensioned drawing of my assembly.

I found that the hardest part of my assembly was adding the final finishing touches, so to speak. My goal was to make my final project as presentable and accurate as possible, so adding all the necessary fillets, colors, and textures was critical. Taking these steps to complete my final project wasn’t all that complicated, but the time it took to add the extra features was quite noticeable and the repeated process of filleting became tedious and annoying. Although I found this “final touches” process to be one of the harder parts of my entire assembly, I believe that the time I took into detailing my project enhances its overall appearance greatly.

In conclusion, I learned a lot from the SolidWorks portion of E Design 100. Along with becoming proficient at SolidWorks and all of its many features, I learned that frustration and struggling to learn something is sometimes a necessary evil to actually learn the material. SolidWorks is not easy and because of all the time that I spent trying to figure out various features and methods of problem solving in the program, I believe that not only did my SolidWorks skills grow, but I grew overall as a student. In my opinion, SolidWorks takes what should be a simple problem and complicates it drastically. By doing this, the program taught me
to persevere and learn through my failures. In the end, I found that I really enjoy SolidWorks even though it gave me many complications throughout the semester and I look forward to using SolidWorks and the techniques I learned in E Design 100 throughout my college career.

Sources:

Tanner Batting Tees
Academy Batting Tees