Home Court of the Los Angeles Lakers: A Tribute to Kobe Bryant

Bijan Chaudhuri
EDesign 100, Section 025 - Dr. Ritter
April 21, 2016
Images

Figure 1: Isometric View
Figure 2: Top View

Figure 3: Front View (Basketball Hoop)
Figure 4: "Painted Area" of the court
Figure 5: "NBA" and "Lakers" Logo

Figure 6: "24" side of the court
Figure 7: Basketball
Figure 8: Overall Dimensions/Drawing of the court
Why choose this object to create in SolidWorks? Why would a kid all the way from the East Coast, in Brooklyn, New York want to waste time reproducing the home court of the Los Angeles Lakers. If he’s from New York, shouldn’t he have made a model of the New York Knicks or Brooklyn Nets home court? Well, for starters, yes, I am a New York Knicks Fan. They are my number 1 team. But my second favorite team is the Los Angeles Lakers. But, the sole reason why the Lakers became my number 1 for this project is because my favorite basketball player of all time, Kobe Bryant, retired this year. The 2015 - 2016 Basketball season was his 20th and final year with the Lakers. With the Lakers, he won 5 championships, an NBA MVP, has 18 All Star Appearances, is 3rd all-time in Scoring and the list of accomplishments goes on. From such a young age, whenever I watched Kobe played, I had nothing but the fondest of memories about him. His clutch, game winning shots, his tenacity, his impeccable footwork, his unblockable fade away, and his work ethic. Calm and efficient under pressure, Kobe is the athlete I aspire to be. I just love everything about him. So, you can imagine how distraught I was when he officially retired after his last game on April 13, 2016. It was that day and game, that provided me with a lasting impression of the legend. On that day, at the age of 37, Kobe Bryant scored 60 points against the Utah Jazz, along with hitting the game winning shot that led his team to a come from behind win. Not only that, but the Laker organization decided to honor Kobe that day with a daylong celebration. The team even customized their home court with Kobe’s jersey numbers (8 and 24) in the hardwood flooring. That court design was impressive and is special. As a result of this special court design, I decided to recreate that same court design used on the 13th of April to pay homage to the man who got me interested in the sport of basketball. In a way, this project is my tribute to an all-time great….. Kobe Bryant.
This Project had three parts to it, the hardwood court, the 2 basketball hoops, and the basketball itself. All the dimensions created were based off the real dimensions of a NBA (National Basketball Association) regulated court. The scale used for this was 1 in = 5 ft. In order to make the hardwood court, it was essentially making a rectangular sketch from the top plane and then “Extrude Boss/Base.” Then, another top plane was created. Sketching from that top plane, the lines/boundaries of the court were created, i.e. the three point line, the free throw line, the number 24, the number 8 etc. To make these lines visible, the “Extruded Cut” feature was used. The type of “Extruded Cut” that was used was the “Thin Feature.” Finally, the “Extruded Cuts” were colored in.

With the basketball hoops, a rectangular base was first created and then the “Extrude Boss/Base” feature was implemented. Then, sketching from the front plane, a path was created so that the “Swept Boss/Base” feature could be used. This feature was supposed to create the support for the backboard/hoop. The path started off with a circle and then a straight path was then created. Any sharp corners of this path were filleted to it a natural bend. A sweep was then used. After this, the backboard was created. This was made by simply making another rectangular sketch and then “Extrude Boss/Base.” The shooting box on the surface of the backboard was created by sketching the outline first and then using the “Thin Feature” in the “Extruded Cut.” To make the hoop itself, a circle was sketched and the “Revolved Boss/Base” was utilized. Finally, to make the strings of the basket, a helix/spiral had to be created that was connected to the hoop. From that, two curved paths were created and then swepted. Next, the “Linear Pattern” feature was adopted, more specifically the “Circular Pattern.” This pattern was to go around the hoop 360 degrees. Thus, the basket was made.
For the Basketball itself, a semicircle was created and revolved a centerline. Next, multiple arcs and circles were sketched within the sphere in order to create paths so that the “Swept Cut” could be utilized. As a result, the “seams” of the ball were created and the ball was complete.

Once the general shapes for each part was made, there was still an issue of placing logos on the basketball hoops and hardwood court. Logos such as Spalding, the NBA, Staples Center, and the Lakers. This was the most difficult part for me throughout this whole process. Due to my lack of knowledge, I had to learn a way to place these logos without compromising the general outlines of the overall project. To do this, the “Sketch Picture” feature had to be implemented. To start off, wherever I wanted to put the logo, I needed to first use the “Extruded Cut” feature. Using this feature, I cut out the general shape of the logo from the surface of where I wanted to insert the pictures. From here, I went to Tools > Sketch Tools > Sketch Picture. After this option is chosen, I uploaded the logo onto SolidWorks and resized it so it would perfectly fit into the extruded cuts made on the surfaces. As a result, the logos were easily visible and placed where they needed to be. Another challenging aspect of this model was making the basket strings for the hoop/basket. In order to do this, I had to grasp a general understanding of 3D sketching in SolidWorks. Once this was achieved, I was able to use the helix/spirals to my benefit and finish it off with a 360 degree “Circular Pattern.”

Looking back at this long process of a project that I thoroughly enjoyed and gave 110% for one of my idols, this all would never have occurred if it wasn’t for the SolidWorks portion of this class. I do remember I had my fair struggles and tensions during the beginning weeks of learning this program. But as the weeks went on, and the more I practiced, I grown to love SolidWorks. It is a rather impressive program. To me, SolidWorks can be used for a variety of
things that can help people, especially engineers. This program can allow people to innovate, design, or even improve objects without really having to waste material in the design process. It also allows people to really understand how something works and its features. If the object is sketched on SolidWorks, then people can take it apart and see its inside contents. See what components makes it efficient and work or what parts are flawed.
Resources


Kobe Bryant 60 Points Highlights | Jazz vs Lakers | April 13, 2016 | NBA 2015-16 Season. (2016, April 13). Retrieved April 15, 2016, from https://www.youtube.com/watch?v=EzpsyFvZ7W0
