ITP 308: Lab5 Stethoscope

Setup

In this lab you will use at least one 3D sketch to model a stethoscope that is laying on a flat surface. The stethoscope is comprised of three main parts:

1. The diaphragm
2. The tubes
3. The earpieces

There are two other parts you might want to consider, but are not required to create. The earpiece rubbers that sit at the end of the metal tubes that are there for comfort fitting to the ear canal.

Requirements

You are required to design and build a stethoscope in such a way that the rubber tube has a twist in the model. This should be three different parts combined into a single assembly. The assembly should be fully defined. See the photo below:

In order to create this type of model, you can create multiple planes and create 2D sketches that will have to join each other tangentially, or create a single 3D sketch and apply tangential relationships so that the tube sweeps will line up.

Your part files should have appropriate materials applied. All sketches should also be fully defined.

Be sure to keep your model as realistic as possible. If you notice in the picture, the rubber is slightly larger where it connects to the membrane and the ear pieces. The tubes are hollow to allow for the air to move through them and transfer the sound waves.

You will have to submit your part files and your assembly file.

Name the parts:

earpiece.sldprt

rubber.sldprt

diaphram.sldprt

stethoscope.sldasm

Deliverables

Compress all files into a single zipped file named: **username_lab5.zip**

Submit your zipped file to Blackboard

Rubric

You will be graded on the following things:

Item	Points
Rubber has a loop in it	3

Rubber is designed realistically (dimensions and model features)	2
Earpiece is designed realistically (dimensions and model features)	3
Diaphragm is designed realistically (dimensions and model features)	3
Assembly is fully defined	2
All parts have materials selected appropriately	3
Total	16