Final Report Comments:

Group 201601 – Virtual Fixtures for Concentric Tube Robot

* Ensure all abbreviations are described (‘FR’ was not described in executive summary)
* Good, clear language – easy to read, follow, understand
* Some grammatical errors found
* Define UDP, PID
* For context, I would have provided a picture of someone using the DVRK to operate the CTR also a diagram of the CTR to show joints, PID controller, etc.
  + This would provide context for section 3.4 user acceptance testing

201605 – Adjustable Trocar

* Don’t double space writing in tables
* Some grammatical errors/misuse or words and redundancies e.g. “during the duration of surgery” should read “during surgery”
* Some sentences were too wordy and should be simplified
* Good integration of prior art in intro.
* Requirements are well organized and described while keeping scope in mind -> integrated time, money, ISO constraints
* System-level/module level – good explanation and helpful/descriptive diagrams
* Good, complete testing documentation and explanations – I like how it was communicated and any failures were addressed accordingly
* Tests were representative of objectives and used resources available to conduct them
* Figure 14 -> something is circled in red which should be explained in the caption
* Sleeve validation – to test if sleeve isn’t punctured, a test that blows air at it to validate there is no hole would be more effective, it seems only a visual test was done which is not convincing that there was no puncture -> would want to ensure the pressure seal was not impacted after an ‘impact’
* Overall very well done! Report was thorough and well-organized

201604 – Kidney and Recellularization System

* Good explanation of FEA
* Thorough testing – well done!
* Found a couple grammatical errors
* Did you consult other medical grade plastic companies to make the chamber?
* Could have 3D printed a chamber to your desired height recommendation to test if that would comply with the system structurally (all sterility testing would be omitted for this version but the desired structure would still be there)
* Good explanation of modules and the research conducted prior to landing on the proposed designs of oxygenator, bubble trap, etc.
* To ease the understanding of the “failed” module designs (like the bubble trap and oxygenator) a diagram to aid the explanation would be beneficial -> this goes for testing explanations as well, although appendix does provide some of this information, in text diagrams would help with understanding
* Labels on the figures would be helpful
* Good explanations on how to further improve the designs/prototypes after testing
* Instead of explaining all components in paragraph form, I would list them (with the product code and manufacturer) in a list/diagram format
* Elaborate on “regulatory constraints”
* Good testing descriptions and rationales -> follows logic
* Show (with arrows) on the picture of the system the path of media flow