

Bubble butt grant

1. Implementation of the project was pursued by first having students objectify the means by which pressure in the balloons of the project could be modified and monitored. Then students decided on the use of blood pressure cuffs and raspberry pi's for global control, and Arduinos for local control of individual balloons.
2. The results of the project were mixed. Students managed to control a set of pillow balloons with the use of additional transducers added to a "T" leading to the pump for each balloon. Next steps would be using one pump for all balloons instead of individual pumps for each balloon. Students needed more time! Another semester would be wonderful!
3. Students surprised the instructor by successfully mapping the pressure transducer in the original system, but we ended up using a different sensor anyway. Nonetheless, this was good practice, reverse engineering an existing system (blood pressure pumps) to inflate balloon pillows.
4. See budget from Carmen Perez Gauvin
5. To replicate this project would require knowledge of ic mapping. I'm not sure other instructors have this knowledge but welcome them to try!
6. Thank you for providing the funding for such an innovative project. The student who is still working this project will be headed to Montana State University to study Mechanical Engineering.