

## Hemodynamic Simulator II (P09026)

Status Report (Week 9)		
Progress & Day's Feedback	<ul style="list-style-type: none"> <li>● Jonathan and Mark revisited actuator calculations to verify that the required torque was indeed within the operating range of the speced actuator.</li> <li>● Developed a simple water loop with pneumatic cylinder, compliance chamber, and recorded data from the pressure sensors.</li> <li>● Discussed and finalized on how the control system parameters will be developed empirically, and how it will be programmed in LabVIEW.</li> <li>● After the design review, pros and cons of Incremental &amp; Absolute encoder were discussed, and selection of either would influence the operation of the control system.</li> <li>● Agreed upon the importance of enhancing the LabVIEW test program, to familiarizing ourselves with software features.</li> </ul>	<b>Friday 10/31/08</b> Gaurav Zirath
Project Objectives	<ul style="list-style-type: none"> <li>● Develop a firm understanding of the individual components design and purpose and also the system as a whole</li> <li>● Weekly meetings with Dr. Schwartz, in order to review the status of the project.</li> <li>● After fully understanding the modular system, the pump would be redesigned in order to better replicate the pumping of the heart, which includes appropriate blood pressure and volume from the heart.</li> <li>● The final product would contain a data acquisition system that would monitor blood pressures, volumes, flow rates at desired locations. In addition, the measured data must be easily accessible to the user.</li> <li>● Furthermore, a computer system would be developed that would allow a user, access to all the parameters of the flow simulator. Hence, providing the user with a better control of the entire unit.</li> </ul>	<b>Friday 9/5/08</b> Gaurav Zirath
Action Items	<ul style="list-style-type: none"> <li>● Call Axis New York to get details on Incremental &amp; Absolute encoders.</li> <li>● In addition, confirm if Axis will be able to split the order into 3 invoices, all below \$1k.</li> <li>● See Jim Stefano to confirm if it is OK to move computer from the workbench to the cart, once we have the Actuator &amp; Mechatrolink Board.</li> <li>● Prepare for project review next week.</li> <li>● Finalize designs for heart, cylinder stand.</li> <li>● Develop a system for mounting the cylinder and actuator in the cart.</li> </ul>	<b>Friday 10/31/08</b> Gaurav Zirath
Week 7 Schedule	<p><b>Sat - Sun:</b> Compile all documents for the design review</p> <p><b>Mon-Tue:</b> Review the final report, &amp; rehearse the presentation</p> <p><b>Wed:</b> Meet with Dr. Phillips, &amp; Dr. Schwarz</p> <p><b>Thu:</b> Team Meeting, prepare for the Design Review</p> <p><b>Fri:</b> DESIGN REVIEW</p>	<b>Friday, 10/31/08</b> Gaurav Zirath