

**P8001 Scheduling Plan**

Team Member	Week 1 (Phase 0&1)	Week 2 (Phase 0&1)
Jennifer Zelasko (ISE)	Interview customer to establish basic needs, likes, and dislikes of existing product. Explore edge and tortus. Ensure deliverables are completed.	Continue research. Draft work Schedule. Ensure deliverables are completed.
Jonathan Bawas (EE)	Interview customer to establish basic needs, likes, and dislikes of existing product. Work with ME's on research. Ensure Deliverables are completed.	Continue research with primary focus on tilt measurement and control. Ensure Deliverables are completed.
James Nardo (ME1)	Research and benchmark current/existing designs, stability products and patents. Research or measure typical pedal speeds & tilt on regular vs. stationary bike for specified ages and heights	Follow up interview. Assess goals and specific needs. Continue research
Jeff Tempest (ME2)	Research and benchmark current/existing designs, stability products and patents. Research or measure typical pedal speeds & tilt on regular vs. stationary bike for specified ages and heights	Follow up interview. Assess goals and specific needs. Continue research
Carl Mangelsdorf (ME3)	Research and benchmark current/existing designs, stability products and patents. Research or measure typical pedal speeds & tilt on regular vs. stationary bike for specified ages and heights	Follow up interview. Assess goals and specific needs. Continue research

Week 3 (Phase 0&1)	Week 4 (Phase 1)	Week 5 (Phase 2)
Determine safe operating specifications with PT feedback. Ensure deliverables are completed.	Brainstorm -- Concept Development (Safety Related issues, Human Factors) Ergonomic design, Serviceability and maintainability design. Ensure deliverables are completed.	System Level Design - on agreed upon concept (Safety Related issues, Human Factors). Physical workload assessment. Identify greatest challenges/ risks. Ensure deliverables are completed. Choose final winning concept across all subsystems.
Concept Development - Finalize goals/specs. Start preliminary design and controls with ME's Power, Voltages, current, cost, size, environmental factors (PT clinic), noise, etc. Assist in determining essential specifications. Ensure Deliverables are complete	Brainstorm -- Concept Development (Sensor/Feedback System) High Level Block Diagrams, Rough Feedback/ Sensor schematic, power budget (and source) and space budget, Critical Component Requirements. Ensure Deliverables are completed.	System Level Design - on agreed upon concept (Sensor/Feedback System) - More detailed block diagrams, schematics. Identify greatest challenges/ risks. Ensure Deliverables are completed. Choose final winning concept across all subsystems.
Finalize goals/specs. Start preliminary designs and controls with EE's	Concept Development - Work on different design solutions to meet the project needs with focus the tilt subsystem.	System Level Design - Decide on the final concept design that best fulfills the project needs. Then begin preliminary analysis of tilt subsystem components to verify practicality. Choose final winning concept across all subsystems.
Finalize goals/specs. Start preliminary designs and controls with EE's	Brainstorm -- Concept Development (Overall System Layout)	System Level Design - on agreed upon concept (Overall System Layout) Choose final winning concept across all subsystems.
Finalize goals/specs. Start preliminary designs and controls with EE's	Brainstorm - Concept Development as a whole as well as individual subsystems	System Level Design - refine mechanical design of subsystem and complete all necessary calculations (Tilt Analysis / Subsystem) Choose final winning concept across all subsystems.

Week 6 (Phase 2)	Week 7 (Phase 2)	Week 8 (Phase 3)
System Level Design - on agreed upon concept (Safety Related issues, Human Factors). Physical model and simulation. Identify greatest challenges/ risks. Ensure deliverables are completed. Begin locating/pricing parts.	System Level Design - Proof of Concept - (Safety, Human Factors) - Physical model and simulation. Demonstrate confidence in design approach (OSHA regulations, NIOSH equation). Risk assessment for technology / cost / schedule. Ensure Deliverables are completed. Continue locating/pricing parts.	Detail Design - Finalize specifications with supporting analysis and implementation plans. Finalize schedules and risk assessments. Ensure Deliverables are completed. Continue locating/pricing parts.
System Level Design - on agreed upon concept (Sensor/Feedback System) - Simulations and modeling. (SPICE and MATLAB) Identify greatest challenges/ risks. Ensure Deliverables are completed. Begin locating/pricing parts.	System Level Design - Proof of Concept - simulation of high risk technologies previously defined (Sensor/Feedback System) - Physical hardware of key subsystems, sensor evaluation, feedback device. Ensure Deliverables are completed. Continue locating/pricing parts.	Detail Design - Final schematics, BOM for subsystem, detailed simulations (MATLAB, SPICE, etc.) Ensure Deliverables are completed. Continue locating/pricing parts.
System Level Design - Work with team members to finalize design of all subsystem and verify compliance among interacting systems. Begin locating/pricing parts.	System Level Design - Begin preliminary modeling of all components in a CAD program of choice. Continue locating/pricing parts.	Continue modeling of all components, as well as begin individual component analysis for stress and durability. Continue locating/pricing parts.
System Level Design - Review design components with other members of group to begin finalizing detail of individual subsystems. Begin locating/pricing parts.	System Level Design- Begin modeling agreed subsystems in CAD system. Continue locating/pricing parts.	Detail Design - Continue modeling subsystems components, modifying as necessary to work with other components. Begin preliminary stress and durability analysis. Continue locating/pricing parts.
System Level Design - Review all design components with members of group and modify as necessary and begin modeling (Tilt Analysis / Subsystem). Begin locating/pricing parts.	Model Subsystem design in 3-D drafting program. Continue locating/pricing parts.	Stress Analysis and Durability Analysis (cycles). Continue locating/pricing parts.

Week 9 (Phase 3)	Week 10 (Phase 3)	Week 11 (Phase 3)
<p>Detail Design - Finalize schedules and risk assessments. Ensure Deliverables are completed. Continue locating/pricing parts. Identify and order items with long lead times.</p>	<p>Project Review - Characterize the ergonomic and safety design, and determine that it has met all specifications and customer needs. Ensure Deliverables are completed. Finish locating/pricing parts. Start to order parts.</p>	<p>Project Review - Make up test plan for and characterize the developed system and determine that it has met all specifications and customer needs. Update EDGE website with all information to date. Ensure BOM is sufficient to define source, cost, and lead times. Prepare and order more materials if possible.</p>
<p>Detail Design - Final schematics, BOM for subsystem, detailed simulations (MATLAB, SPICE, etc.) All long lead items identified, and should be ordered. Ensure Deliverables are completed. Continue locating/pricing parts. Identify and order items with long lead times.</p>	<p>Project Review - Characterize the developed electronic system and determine that it has met all specifications and customer needs. Ensure Deliverables are completed. Finish locating/pricing parts. Start to order parts.</p>	<p>Project Review - Characterize the developed electronic system and determine that it has met all specifications and customer needs. Update EDGE website with all information to date. Ensure BOM is sufficient to define source, cost, and lead time. Prepare and order more materials if possible. Test/ Pro</p>
<p>Finalize the componet modeling as a complete assembly, as well as finish any analysis. Continue locating/pricing parts. Identify and order items with long lead times.</p>	<p>Review overall system performance as a complete assembly. As well as verify that specifications have been met. Finish locating/pricing parts. Start to order parts.</p>	<p>Project Review - Present design to Review Committee. Verify all documentation posted on EDGE website reflects current status. Look into order subsystem materials.</p>
<p>Detail Design - Finalize stress and durability analysis. Complete Assmebly of of overall product in CAD. Continue locating/pricing parts. Identify and order items with long lead times.</p>	<p>Project Reviw - Review specs to ensure that completed design has met all design specifications previously set forth. Finish locating/pricing parts. Start to order parts.</p>	<p>Project Review - Review design. Verify that all material is up-to-date. Finish locating/pricing parts. Prepare and order more materials if possible. Begin Preparing for SD II.</p>
<p>Finalize all analysis components and model as a whole, complete product. Continue locating/pricing parts. Identify and order items with long lead times.</p>	<p>Review overall system and compliance with specs. Finish locating/pricing parts. Start to order parts.</p>	<p>Prepare and order more materials if possible.</p>