

# Handicap Accessible Bicycle

**Client:** Ted Elias

**Advisor:** John Puccinelli

**Team:** Morgan Kemp mrkemp@wisc.edu (Team Leader)  
 Tianna Garcia tngarcia@wisc.edu (Communicator)  
 Shelby Mochal smochal2@wisc.edu (BPAG)  
 Emmy Russell eerussell2@wisc.edu (BWIG/BSAC)

**Date:** 4/20/17-4/27/17

## Problem Statement

The current options for a disabled adult to participate in a fun task such as going for a bike ride are very limited in availability and price. The current market also does not provide multiple options to fit the needs of a traumatic brain injury (TBI) patient and their limited mobility. Not only is our client's wife recovering from a TBI, but also a mother who would very much enjoy going for simple bike ride. By creating a new bike "sidecar" custom to the needs and capabilities of the client's wife and with cost of around \$500, more family activities can be a part of our client's life.

## Last Week's Goals

Finish the axle attachment, create pedals, add accessories.

## Summary of Team Role Accomplishments

- Team Leader, Morgan: Facilitated team meeting, organized deliverables, agenda
- Communicator, Tianna: Invited Ted to final presentations
- BSAC, Emmy: Attended BSAC meeting
- BWIG, Emmy: Updated website with project status and progress report
- BPAG, Shelby:

## Summary of Design Accomplishments

- Finished manufacturing, tested, and worked on poster

## Activities

Date	Person	Task	Time(hrs)	Weekly Total	Semester Total
4/20/17	Morgan	Agenda	.25	30.75	64.5
4/21/17		Axle manufacturing, Frame Welding,	4		
4/22/17		Welding, Wheel boring, cutting pedal holes, making pedal blocks, seatbelt	8		
4/24/17		Welding, Axle work	5		
4/25/17		Pillow block pick up, Welding, Prototype testing	4		
4/26/17		Painting, Prototype Testing, Welding, Bike Seat Replacement	5.5		
4/27/17		Spray Paint	1		
4/20/17		Lathe Axle	3		
4/21/17	Tianna	Cut pedal bar rods	2.5	28.75	60.25
4/22/17		Cut pedal bar rods	2		
4/22/17		Weld support bar and clean up other welds	3		
4/22/17		Work on pedal attachment	2.5		

4/22/17		Install seat belt	.25		
4/24/17		Weld pedal bars, pedals, and sprocket	5		
4/25/17		Thread pedal rods, reinforce pedal bar welds, install pedal blocks, assembly and rough testing	8		
4/26/17		Finish welding pedal bars, assembly, testing, and begin painting	5.5		
4/23/17	Shelby	Work on final poster presentation	2	21	51.5
4/24/17		Lathe two short steel cylinders with a hole 1/4", hand tap 8 holes, lathe and thread axle	5		
4/25/17		Ask shop about pillow block attachment and prep, thread pedal bar, drill press for pillow block attachment, prototype assembly and rough testing	8		
4/26/17		Pedal assembly, footrest attachment, testing, prime spray paint	5		
4/27/17		Spray paint trailer	1		
4/20/17	Emmy	Welded seat attachment onto frame	3	16	52.5
4/21/17		Found best location to purchase pillow blocks	1		
4/23/17		Worked on final report and poster	0.5		
4/24/17		Attempted to pick up pillow blocks	1		
4/24/17		Prepared and attached sprocket to pedal bars	3		
4/25/17		Worked on final report	1		
4/26/17		Finish welding pedal bars, assembly, testing, and begin painting	5.5		
4/26/17		Worked on final poster	0.5		
4/27/17		Worked on final poster	0.5		
	Team				15

**Statement of Team Goals**

Presentation and final report

**Individual Goals**

- Morgan – Work on notebook
- Tianna – Continue fabrication and work on final poster
- Shelby- Update notebook and work on final deliverables
- Emmy- Work on final deliverables

**Difficulties:** None

**Project Schedule/Timeline:**

Task	January			February				March				April			May
	20	27	3	10	17	24	3	10	17	24	31	7	14	21	28
<b>Project R&amp;D</b>															
Background Research	X	X	X	X	X										
Brainstorming		X	X	X	X										
Create 3 Design Ideas			X	X											
Create Design Matrix				X											
Order Parts							X								
Manufacturing												x	x	X	x
<b>Deliverables</b>															
Progress Reports	X	X	X	X	X	X	X	x	X	x	x	x	x	X	x
PDS		X													
Midsemester					X										
Final Design							X								
Create Poster															x
Team Report															X
Team Presentation															X
Website	X	X	X	X	X	X	X	x	X	x	x	x	x	X	x
<b>Meetings</b>															
Client		X													
Team	X	X	X	X	X	X	X	x	X	x	x	x	x	X	x
Advisor		X	X	X	X	X	X	x	X	x	x	x	x	X	x

**Expenses:**

Seat \$95.99

Bars \$98.50

Hitch \$26

Bike \$ 100

Axle Material \$ 20

Pillow Block \$75