

Robotic Arm



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Project Description

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- Goal: develop a **waist-mounted robotic arm** that
 - Offers **active gravity compensation**
 - Remains **lightweight, low-profile, and energy efficient**
 - Enables the arm to rest naturally by the user's side.
- **Client:** Dr. Zach Lerner, Associate Professor of Mechanical Engineering, NAU.
- **Sponsorship:** W.L Gore

Purchase Plan

Type	Including	Percentage bought	Percentage on Hand
Fasteners	Screws, bolts, washers, heat set inserts, etc.	100	100
Printing Material	PLA, Onyx, and Carbon	100	100
Electronic Components	Batteries, Motor, control boards, etc.	100	100
Overall		100	100

Manufacturing plan

Manufacturing Plan							
Completion	Part No.	Material	Quantity	Manufacturing Hours / Part	Total Hours	Quantity Completed	Completed Time
	DET001	Carbon Fiber	3	1	3	3	3
	DET002	ONYX + C	1	11	11	1	11
	DET003	ONYX	1	2	2	1	2
	DET004	ONYX	1	1.66	1.66	1	1.66
	DET005	ONYX + C	2	1.33	2.66	2	2.66
	DET006	ONYX + C	2	5.5	11	2	11
	SUB01-DET001	ONYX + C	1	4	4	1	4
	SUB01-DET002	ONYX + C	1	3	3	1	3
	SUB03-DET001	ONYX	1	2.15	2.15	1	2.15
	SUB03-DET002	ONYX	1	2	2	1	2
	SUB03-DET003	ONYX	1	2	2	1	2
	Control Board	-	1	1	1	1	1
	Battery Connections	-	1	1	1	1	1
	Control Board Housing	PLA	1	3	3	1	3
		Totals:	18	40.64	49.47	18	49.47
						Completed Manufacturing (%)	100.00%
						Manufacturing Time (%)	100.00%

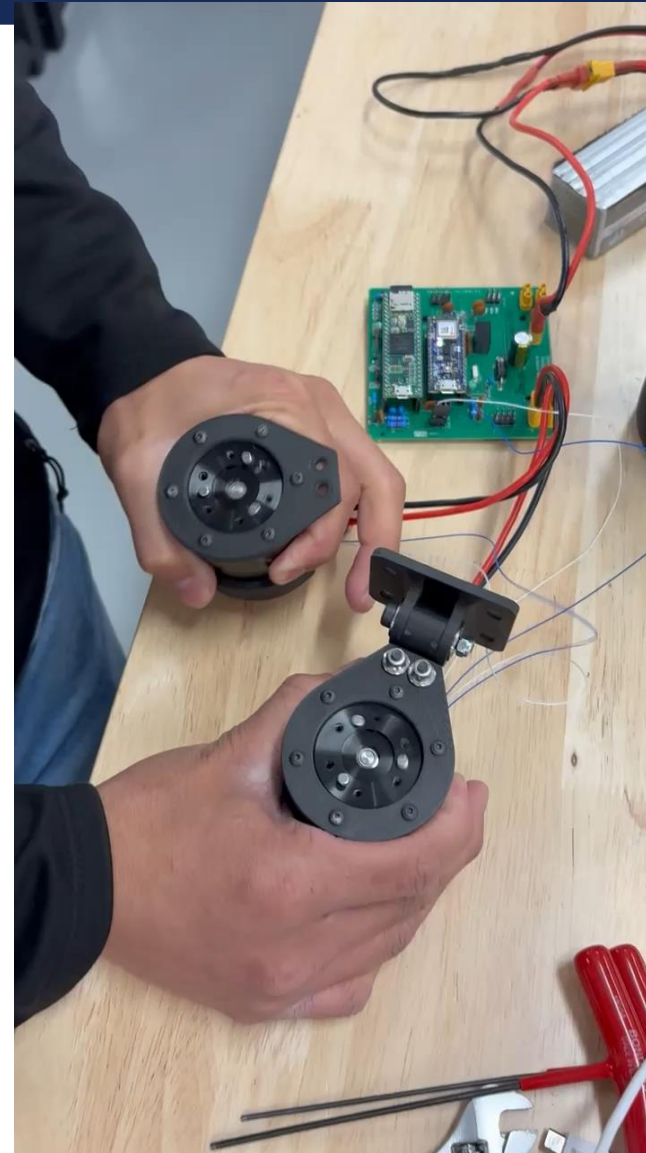
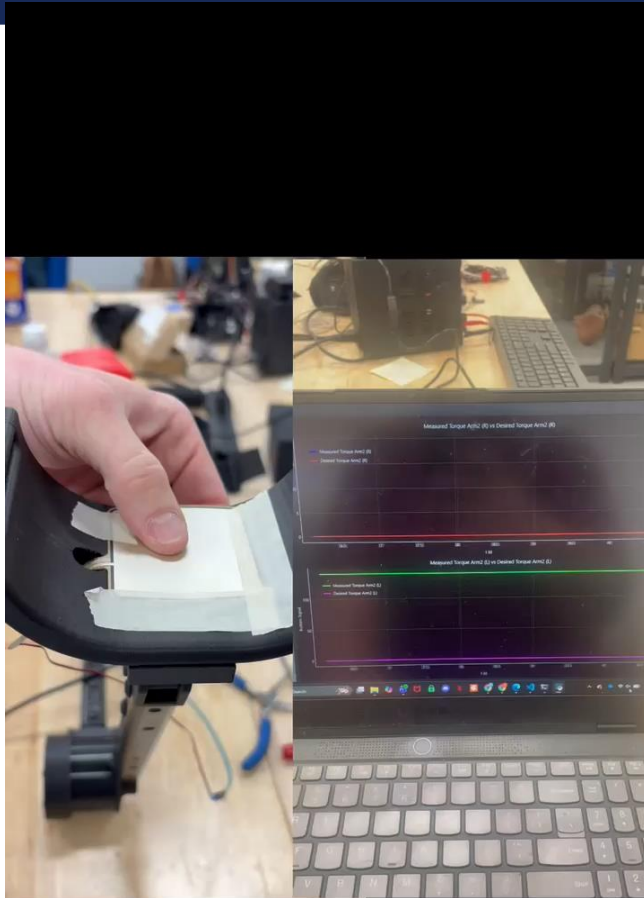
Manufacturing Process



Manufacturing Process



Demonstration



**Thank you
And
Any Questions?**