

UConn IDEA Grant Budget Example

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Item Name	Category	Explanation	Link	Quantity	Unit Price	Total Item Price
Arduino Micro	Electronics	The arduino is the brain of the device, controlling motors and receiving input from the EMG board.	http://www.adafruit.com/products/1086	2	24.95	49.9
EMG Sensor Kit	Electronics	The EMG board is what allows the Arduino to know how stressed the muscles are in the amputee's forearm.	https://www.sparkfun.com/products/13027 https://www.sparkfun.com/products/12970 https://www.sparkfun.com/products/12969	2	39.85	79.7
Force Sensors	Electronics	The force sensors will allow the arduino to know when the hand has successfully grasped an object and should stop applying force.	http://www.adafruit.com/products/1071	10	17.95	179.5
Lithium Ion 3.7VDC Battery Packs	Electronics	These battery packs will power all the electronics onboard.	https://www.adafruit.com/products/353	4	29.5	118
Powerboost Lithium Ion Battery Charger and Voltage Booster	Electronics	This chip takes the 3.7 volts that the batteries produce, and bumps it to 5.2 volts, which is enough to power the arduino. This chip also includes a charging circuit	https://www.adafruit.com/products/2465	2	19.95	39.9
Metal Gear High Torque Servo Motor	Electronics	These servos will articulate the fingers of the device. Their incredibly high torque will allow them to grasp heavy objects.	https://www.servocity.com/html/s9156_servo.html#_VXc6Ks9VikoVXc2xc9Viko	5	124.99	624.95
Soldering Iron	Electronics	Necessary to solder components and boards together. Variable temperature to ensure sensitive components aren't heated beyond capacity.	http://www.amazon.com/Hakko-Digital-FX888D-Soldering-Station/dp/B00AWUFVY8/ref=pd_sim_469_9?ie=UTF8&refRID=104BJ9EFT01TNVRK91W3	1	97.45	97.45
Assorted Electronics	Electronics	Connectors, wires, solder, jumpers, headers, heatshrink, solder braid, insulation, and other necessary items to solder the circuit.	N/A	1	250	250
PLA FDA Approved Filament	3D Printing	This material is what the majority of the device will be constructed from. Strong and reliable, PLA is the ideal choice for a prosthetic device.	http://www.makergeeks.com/fosafdapla21.html	6	49.95	299.7
Ninjaflex Elastomer Filament	3D Printing	Ninjaflex will be used to print a mock-up socket that would attach to an amputee's remaining forearm.	https://www.sparkfun.com/products/12947	4	59.95	239.8
Kapton Tape Spool	3D Printing	Kapton tape is a necessary item in 3D printing, it provides a smooth, gripping surface upon which the molten filament will grip.	http://www.amazon.com/Gizmo-Dorks-Kapton-Tape-Printers/dp/B00LAJNOXK/ref=sr_1_6?ie=UTF8&qid=1433964214&sr=8-6&keywords=kapton+tape	1	29.99	29.99
XTC3D Print Coating	3D Printing	This coating greatly improves the integrity of 3D printed parts, reducing likelihood of layer delamination	http://www.amazon.com/Filabot-XTC24-XTC-3D-Performance-Coating/dp/B00TS7TYXA/ref=sr_1_15?s=industrial&ie=UTF8&qid=1433970143&sr=1-15&keywords=3d+printing	2	26.15	52.3

Octave 3D Printed Part Toolkit	3D Printing	Due to the fact that the parts that are being printed are very intricate and fine in detail, a large amount of support material will be necessary to yeild successful prints. These tools are designed to remove this material easily and cleanly.	http://www.amazon.com/Octave-Tool-Kit-3D-Printer/dp/B00ASFRSP2/ref=pd_sim_328_1?ie=UTF8&refRID=14KRPB1ZCRZ7EH6TSMFH	1	19.95	19.95
Educational Materials	Other	Having no background in Biology, or a potential test subject, I need to identify ideal locations for the EMG sensor pads. This will be done through research in related textbooks, studies, and web databases. Some of these funds will also go towards a Blender CAD tutorial that will allow me to design the hand to look more realistic and practical.	N/A	1	350	350
Upholstery Foam	Other	A configuration of this material will line the socket to provide comfort to a potential user.	http://www.amazon.com/Upholstery-Cushion-Replacement-Sheet-Padding/dp/B00AL3G7US/ref=sr_1_6?ie=UTF8&qid=1433970050&sr=8-6&keywords=foam	1	27.26	27.26
Dental Bands	Other	These small rubber bands will give the fingers a naturally outwards articulation, allowing the servos to power down the majority of the time, saving on power.	http://www.amazon.com/Clear-16-4-5-Oz-Orthodontic/dp/B00A2YCR5K	2	5.25	10.5
Shipping	Other	Shipping costs.	N/A	1	300	300
Stipend	Other		N/A	1	900	900

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ITEM	EXPLANATION	AMOUNT
Equipment		
Projector Set	This is necessary for displaying video footage as part of the installation	\$350 (Link to specific projector set)
Projection Mapping software	This is needed to control the locations and timing of images that will be projected as part of the installation	\$350 (Link to software)
Track Lighting Set	Two sets are needed to highlight specific parts of the art installation	\$120 (\$60 per set – Link)
Light Bulbs	Needed for the track lighting set	\$7.50 (Link)
Consumables		
Roll of heavy weight oil primed linen canvas	Necessary for paintings	\$300 (Link)
Oil Paints		\$300 (Link)
Misc. Brushes		\$100 (Link)
Framing Materials (thin wood or other support)	Necessary for mounting the paintings	\$80 (Link)
Turpenoid	Brush cleaner	\$40 (Link)
Stretcher Bars	For stretching canvas	\$30 (Link)
Gesso & gesso brush	Priming Material	\$45 (Link)
Liquin	Painters Medium	\$30 (Link)
Misc.		
Large format color printing from UConn's DASL	For printing digital art pages. DASL can print the large sizes needed for the installation.	\$240 (Link)
Marketing Materials	Postcards and flyers to market the art installation	\$65 (Link to cost estimate)
Stipend		
Stipend	I anticipate spending 10 hours per week during the Fall semester working on my project. This will take away from the time I normally spend working an on-campus job.	\$1400
Total Amount Requested		\$3457.50

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ITEM	AMOUNT
DNA Extraction Chemicals <ul style="list-style-type: none"> • Chloroform 100%, 0.5L – \$81.72 • Isopropanol 100%, 0.5L - \$61.50 • Ammonium Acetate (7.5 M) - \$76.81 • Ethanol 100%, 0.5 L - \$60.45 • Ethanol 70%, 0.5 L - \$55.95 • Tris-EDTA buffer, 0.5 L - \$75.19 • TAE (Tris base, acetic acid and EDTA) buffer, 1 L - \$70.16 	\$481.78
PCR Reagents <ul style="list-style-type: none"> • Agarose, 100 g - \$136.00 • SYBR® green, 2.5 ml - \$153.50 • Loading dye (1 ml) - \$81.20 • PCR Buffer (10X), 600 µl - \$66.00 • Dimethyl Sulfoxide (DMSO), 1 L - \$37.34 • dNTP (nucleotide mix) 1 µl - \$65.52 • Taq Polymerase (500 reactions) - \$580.00 • Primers (Forward and Reverse for 3 ITS, <i>matK</i>, and <i>rbcl</i>) - \$60.00 	\$1179.56
DNA Sequencing <ul style="list-style-type: none"> • ExoSAP-IT (for cleanup of PCR products), 300 reactions - \$123.13 • Microbiology grade water - \$21.15 • BigDye® Terminator v1.1. – 1276.00 • Sephadex, 15 g - \$148.80 	\$1569.08
DNA Cloning <ul style="list-style-type: none"> • TOPO TA cloning kit (Invitrogen), 20 reactions - \$484.00 	\$484.00
Scanning Electron Microscopy on Pollens <ul style="list-style-type: none"> • 9 hours (\$30 per hour) - \$270.00 	\$270.00
Running ABI Sequencing Machine at EEB <ul style="list-style-type: none"> • 34 samples (\$1 per sample) - \$34.00 	\$34.00
TOTAL	\$4018.42

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ITEM	EXPLANATION	AMOUNT
Travel		
Travel to Washington DC to conduct research at the National Archives and for two subject expert interviews	I plan to travel to Washington DC to conduct research at the National Archives (primary source documents in the Archival Research Room) and for two subject expert interviews at Georgetown University and the Smithsonian	
Airfare	American Airlines, round trip from Hartford to Washington DC	\$350
Lodging	Best Western, \$120/night for 3 nights plus tax and fees	\$400
Food	\$30/day for 4 days	\$120
Metrorail Fares	\$10/day for 4 days	\$40
Transportation to and from Bradley (Hartford) airport from Storrs	UConn Bradley Airport Shuttle	\$120
Equipment		
Consumables		
Misc. Supplies	Printing, paper, ink, binders, folders	\$100
Misc.		
Poster Printing	Poster printing in preparation to share research findings	\$50
Stipend		
Stipend	I anticipate spending an average of 10 hours per week during the fall and spring semesters working on my project, with additional time traveling during winter break to Washington DC. The stipend will allow me to dedicate my time to this work, time that would otherwise be spent working an on-campus job.	\$2100
Total Amount Requested		\$3280