



# **WEEF ALLOCATIONS**

## **W2021**

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**Academic Equipment & Resources**

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	1
382275 Power Supply	3050	2500	1900	0	3050	Proposal	W21-143
High Speed USB DAQ	4050	3250	2450	0	4050	<b>Eugene Li Expanded WATiMake Capacity</b>	
Cubicon 3D Printer	4800	4800	0	0	4800		
	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	11900	10550	4350	0	11900		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	3
DJI Zenmuse L1 RGB LiDAR	14746.5	0	0	0	14746.5	Proposal	W21-177
0	0	0	0	0	0	<b>Mark Hummel Aerial Drone – LiDAR attachment</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	14746.5	0	0	0	14746.5		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	4
50 Intel NUC8V5PNK workstations + 500 GB SSD + 8 GB RAM	45765	22883	9135	4576.5	9153	Proposal	W21-144
0	0	0	0	0	0	<b>Dennis Herman Chemical Engineering Computer Teaching Classroom and 4th Year Study Room Workstation Replacements</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	45765	22883	9135	4576.5	9153		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	5
Quantek CO2 Analyser (Model 960)	4150	4150	4150	0	4150	Proposal	W21-145
Brooks Thermal Mass Flow Controller	2650	1325	1325	0	2650	<b>John Zhang</b> <b>Upgrading of CO2 Capture Laboratory Experiment for ChE Undergraduate Laboratory Learning</b>	
CO2 Mass Flow Controller (Cole Parmer UZ-32678-10)	2089	1044.5	0	0	2089		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	8889	6519.5	5475	0	8889		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	7
Power feeder for milling machine. Options are different quantities, 4 -1	2825	2118.8	1412.5	706.25	2825	Proposal	W21-157
6" Rotary table with 4" chuck	1205	1010	0	0	1205	<b>Graeme Adair</b> <b>Tools for engineering student shops</b>	
6" Sine plate with toolmaker vice	1260	924	0	0	1260		
Depth micrometer and coolant proof caliper	929	528	401	0	929		
0	0	0	0	0	0		
<b>Total</b>	6219	4580.8	1813.5	706.25	6219		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	8
Pump and piping (\$300 per setup)	1500	1200	900	600	1500	Proposal	W21-161
Tank (\$150 per setup)	750	600	450	300	750	<b>Chris Rennick</b> <b>Ideas Clinic - Water treatment</b>	
Sensors (salinity, dissolved oxygen, pH, temperature, water level) (\$300 per setup)	1500	1200	900	600	1500		
Electronics (\$50 per setup)	250	200	150	100	250		
Manual testing/verification equipment (\$200 per setup)	1000	800	600	400	1000		
<b>Total</b>	5000	4000	3000	2000	5000		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	10
24 new computers for the Computer Lab	66901.2	76478	60017	62186	0	Proposal	W21-169
0	0	0	0	0	0	<b>Alfredo Sordo New Computers for the Computer Lab</b>	
0	0	0	0	0			
0	0	0	0	0			
<b>Total</b>	66901.2	76478	60017	62186	0		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	12
Portable Welding Screen	200	400	600	0	600	Proposal	W21-154
0	0	0	0	0	0	<b>Abeer Ali Portable Welding Screen</b>	
0	0	0	0	0			
0	0	0	0	0			
<b>Total</b>	200	400	600	0	600		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	14
Ultimaker 3S 3D-printer	5850	2925	1500	0	1500	Proposal	W21-156
0	0	0	0	0	0	<b>Jason Grove Capstone Lab 3D Printer</b>	
0	0	0	0	0			
<b>Total</b>	5850	2925	1500	0	1500		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	15
NVIDIA Jetson Nano (\$100 each)	1000	0	0	0	1000	Proposal	W21-162
Stereo camera \$200 each	2000	0	0	0	2000	<b>Chris Rennick Ideas Clinic - Industry 4.0</b>	
Electronics \$200 each	2000	0	0	0	2000		
Mechanical components for assembly line \$1000 each	10000	0	0	0	10000		
0	0	0	0	0			
<b>Total</b>	15000	0	0	0	15000		

Item	Option 1	Option 2	Option 3	Option 4	Allocated	Page	17
4 new computers and monitors for the MLab	12433.9	12746	11286	11268	6992.5	Proposal	W21-172
0	0	0	0	0	0	<b>Alfredo Sordo New Computers for the MLab</b>	
0	0	0	0	0			
<b>Total</b>	12433.9	12746	11286	11268	6992.5		

<b>Total (ALLOCATED)</b>	80,000
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### Miscellaneous

Item	Option 1	Option 2	Option 3	Allocated	Page	19
Jobsite Table Saw	2000	1699	850	2000	Proposal	W21-152
0	0	0	0	0	<b>Alexa Holder Jobsite Table Saw for Design Build Projects</b>	
0	0	0	0	0		
0	0	0	0	0		
0	0	0	0	0		
<b>Total</b>	2000	1699	850	2000		
Item	Option 1	Option 2	Option 3	Allocated	Page	20
Chairs (up to 4 at \$1500 each)	3000	1500	0	1500	Proposal	W21-158
Tables (up to 3 at \$500 each)	1000	500	0	1000	<b>Mary Robinson Furniture for CPH nook (Winter 2021)</b>	
0	0	0	0	0		
0	0	0	0	0		
0	0	0	0	0		
<b>Total</b>	4000	2000	0	3500		

Item	Option 1	Option 2	Option 3	Allocated	Page	21
Portable Induction Countertop Burner: double burner	246	312	160	312	Proposal	W21-158
Airpot	552	230	410	230	<b>Denise Mueller Student Wellness Initiative (Flasks/Induction Unit to improve student experience)</b>	
Portable Induction Countertop Burner: single burner (instead of double burner - item #1	200	202	0	202		
Plastic Unit to hold sugar packages/stir sticks/tea/napkins	56	0	0	0		
pots/pans set	125	95	116	95		
<b>Total</b>	1179	839	686	839		

Item	Option 1	Option 2	Option 3	Allocated	Page	24
Digital Signage	7420	7725.9	8139.2	4950.99	Proposal	W21-165
0	0	0	0	0	<b>Abeer Ali Digital Signage</b>	
0	0	0	0			
0	0	0	0			
0	0	0	0			
<b>Total</b>	7420	7725.9	8139.2	4950.99		

Item	Option 1	Option 2	Option 3	Allocated	Page	26
Discord Server Booster (\$12 per month)	100	50	0	0	Proposal	W21-166
0	0	0	0	0	<b>Garrett Miller-Junk Discord Server Enhancement</b>	
0	0	0	0			
0	0	0	0			
0	0	0	0			
<b>Total</b>	100	50	0	0		

Item	Option 1	Option 2	Option 3	Allocated	Page	26
ThinkStation P330 Tiny	1750	0	0	1750	Proposal	W21-166
Logitech C920 Webcam	160	160	160	160	<b>Shein Saunders- Henning Engineering Orientation</b>	
Audio Technica AT2020	170	170	170	170		
Lenovo Wireless Mouse Keyboard Combo	75	75	0	75		
0	0	0	0			
<b>Total</b>	2155	405	330	2155		

<b>Total (ALLOCATED)</b>	13444.99
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## Student Teams

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	32
Coverage of access to software licenses	1500	2000	2500	3000	3000	Proposal	W21-148
Partial coverage of registration fees	1500	2000	2500	3000	3000	<b>iGEM</b>	
<b>Total</b>	3000	4000	5000	6000	6000		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	34
Electrical Components	4000	3360	2544	1732	4000	Proposal	W21-149
Mechanical Components	3700	3108	2354	1602	3700	<b>UWRT</b>	
Software/ Firmware Components	400	336	256	174	400		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	8100	6804	5154	3508	8100		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	36
Slack Monthly Payments	612.72	306.36	204.24	153.2	0	Proposal	W21-151
0	0	0	0	0	0	<b>UW Blueprint</b>	
0	0	0	0	0	0		
<b>Total</b>	612.72	306.36	204.24	153.2	0		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	37
Aeroshell	2000	1700	1500	1000	2000	Proposal	W21-170
General Mechanical Supplies	1500	1200	1000	700	1500	<b>Waterloop</b>	
General Electrical Supplies	1000	800	600	400	1000		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	4500	3700	3100	2100	4500		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	40
Calendar/Organiser	60	80	60	50	0	Proposal	W21-159
Zoom Subscription	320	350	300	300	0	<b>UW IISE</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	380	430	360	350	0		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	43
Pool	350	350	350	350	350	Proposal	W21-160
Miscellaneous testing equipment (O rings, marine epoxy)	200	100	0	0	100	<b>Aquadrone</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	550	450	350	350	450		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	45
Robot Belts	400	350	300	250	300	Proposal	W21-164
Power Station	500	450	400	350	400	<b>VEX U Robotics</b>	
Competition Field Perimeter	1100	1000	800	700	800		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	2000	1800	1500	1300	1500		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	48
Work Bay Upgrades	300	250	250	200	300	Proposal	W21-171
Plumbing	3000	2800	2500	2500	3000	<b>Waterloo Rocketry</b>	
Avionics	2000	1800	1700	1200	2000		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	5300	4850	4450	3900	5300		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	51
PCBs and PCB Componentes	4000	4500	4600	5000	4000	Proposal	W21-147
Soldering and Labelling Equipment	1750	0	0	0	1750	<b>Midnight Sun Solar Rayce Car Team</b>	
HV Cables, Connectors, and Fuses	1050	0	0	0	0		
NiMH Cells	700	0	0	0	700		
ASUS MB16AMT 15.6" touchscreen	500	0	0	0	500		
0	0	0	0	0	0		
<b>Total</b>	8000	4500	4600	5000	6950		



Item	Option 1	Option 2	Option 3	Option 4	Final	Page	54
Shipping Costs for the 4 year competition	1290	800	400	0	1290	Proposal	W21-150
Miscellaneous emergency expenses during competition	700	300	0	0	0	<b>WATonomous</b>	
Caster with mounting plate for dummy rig (4 units)	160	0	0	0	160		
Rope	30	0	0	0	30		
0	0	0	0	0			
<b>Total</b>	<b>2180</b>	<b>1100</b>	<b>400</b>	<b>0</b>	<b>1480</b>		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	56
Yamaha WR450 and Parts	7500	6700	6000	5500	7500	Proposal	W21-153
Dremel	250	250	250	0	250	<b>UWFM</b>	
Sensors and Electronics components	550	550	250	80	550		
3D Printer Filament	100	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	<b>8400</b>	<b>7500</b>	<b>6500</b>	<b>5580</b>	<b>8300</b>		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	58
Manufacturing Simulation Hardware (Fischertechnik Models, Dobot Robots, Lego Mindstorms, Lego Technic Liebherr)	1000	1800	390	500	1000	Proposal	W21-163
Game-making Software (Construct 2, Stencyl, Adobe Animate)	250	99	360	0	250	<b>Industry 4.0</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	<b>1250</b>	<b>1899</b>	<b>750</b>	<b>500</b>	<b>1250</b>		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	60
Sensor Breakout Boards	950	600	350	0	600	Proposal	W21-167
Zeropilot Board	650	350	0	0	350	<b>WARG</b>	
Telemetry Equipment	360	250	100	0	250		
Various Sensors (GPS, airspeed, ultrasonic)	400	300	200	0	300		
Airframe	1500	1200	0	0	1200		
<b>Total</b>	<b>3860</b>	<b>2700</b>	<b>650</b>	<b>0</b>	<b>2700</b>		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	62
Computer Hardware (12-Core, 4.6GHz AMD Ryzen 9 3900X, 2x8GB DDR6 NVIDIA GPU, 64GB 3200MHz DDR4 RAM, 1TB SSD)	3350	2000	1500	1000	1500	Proposal	W21-168
Security and Peripherals (Kensington Lock and Cage, Keyboard, Mouse, Monitor)	800	600	400	200	400	<b>EWB</b>	
Software Licenses (AutoDesk, AutoCAD & Revit LT, Fusion 360, Windows 10 Pro, Unraid)	1360	1000	750	500	750		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	5510	3600	2650	1700	2650		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	65
Freezer Storage Sandwich Panel - used for wall panels	557.65	557.65	557.65	557.7	557.65	Proposal	W21-173
Crew Lock Chamber Fabric - to help create a vacuum space	500	300	400	500	500	<b>WatLock</b>	
CO2 Sensors	471.36	471.36	314.24	0	471.36		
COVID-19 Safety Materials - To provide our team members with protective gear	100	50	50	100	0		
0	0	0	0	0	0		
<b>Total</b>	1629.01	1379.01	1321.89	1157.65	1529.01		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	67
Pick and Place Machine	11500	11000	10500	10000	11000	Proposal	W21-174
Reflow Oven	5500	0	0	0		<b>SSDC (Multiple Teams)</b>	
ESA Visit and Modification	3000	0	0	0			
0	0	0	0	0			
0	0	0	0	0			
<b>Total</b>	20000	11000	10500	10000	11000		

Item	Option 1	Option 2	Option 3	Option 4	Final	Page	69
Driver Safety Gear	1100	830	680	550	1100	Proposal	W21-175
Electrical Components	1590	1590	1090	740	1590	<b>Waterloo Formula Electric</b>	
Transponder	756	535	0	0	756		
Firmware development boards	400	330	240	150	400		
Hot Air Gun	1000	0	1000	0	1000		
<b>Total</b>	4846	3285	3010	1440	4846		

<b>Total (ALLOCATED)</b>	66555.01
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<b>Reallocations</b>							
<b>Item</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>	<b>Reallocated</b>	<b>Page</b>	<b>30</b>
Precision Pump Tube will be used to steadily pump liquid nitrogen to the MAYA assembly for more accurate quatum flux pin.t	687.5	618.75	550	481.3	687.5	Proposal	W21-146
0	0	0	0	0	0	<b>UWNRG</b>	
0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		
<b>Total</b>	687.5	618.75	550	481.3	687.5		

Academic Equipment and Resources				Allocated
Department/Team	Proposal #	Proposal Title	Requested	
Mechanical and Mechatronics Eng (WATiMake)	143	Expanded WATiMake Capacity	\$11,900.00	11900
Civil and Environmental Engineering	177	Aerial Drone - LiDAR attachment - CEE	\$14,746.50	14746.5
Chemical Engineering	144	Chemical Engineering Computer Teaching Classroom and 4th Year Study Room Workstation Replacements	\$45,765.00	9153
Chemical Engineering	145	Upgrading of CO2 Capture Laboratory Experiment for ChE Undergraduate Laboratory Learning	\$8,889.00	8889
Sedra student design centre	157	Tools for engineering student shops	\$6,219.00	6219
Engineering Ideas Clinic	161	Ideas Clinic - Water treatment	\$5,000.00	5000
Architecture	169	New Computers for the Computer Lab	\$76,478.40	0
School of Architecture - Fabrication Lab	154	Portable Welding Screen	\$600.00	600
Chemical Engineering	156	Capstone Lab 3D Printer	\$5,850.00	1500
Engineering Ideas Clinic	162	Ideas Clinic - Industry 4.0	\$15,000.00	15000
Architecture	172	New Computers for the MLab	\$12,433.89	6992.5
			<b>Total</b>	<b>80000</b>
			\$ 2,02,881.79	
Miscellaneous				Allocated
Waterloo Architecture Fabrication Lab	152	Jobsite Table Saw for Design Build Projects	\$2,000.00	2000
First Year / Engineering Undergrad Office	158	Furniture for CPH nook (Winter 2021)	\$4,000.00	3500
Chemical Engineering	155	Student Wellness Initiative (Flasks/Induction Unit to improve student experience)	\$1,179.00	839
School of Architecture	165	Digital Signage	\$8,139.20	4950.99
Mechatronics Stream 8 Class of 2025	166	Discord Server Enhancement	\$100.00	0
Engineering Orientation Team	176	Engineering Orientation	\$2,155.00	2155
			<b>Total</b>	<b>13444.99</b>
			\$ 17,573.20	
Student Teams				Allocated
Waterloo International Genetically Engineered Machine (iGEM) Design Team	148	Waterloo iGEM Winter 2021 Funding Proposal	\$6,000.00	6000
UWaterloo Robotics Team	149	W2021 UWRT WEEF Proposal	\$8,100.00	8100
UW Blueprint	151	Essential Software for UW Blueprint	\$612.72	0
Waterloop	170	Waterloop WEEF Proposal W21	\$4,500.00	4500
UWaterloo IISE	159	UWaterloo IISE WEEF Sponsorship Proposal	\$430.00	0
Waterloo Aquadrone	160	Materials for at home testing	\$550.00	450
VEX U Robotics	164	VEX U Robotics 2021 Winter	\$2,000.00	1500
Waterloo Rocketry	171	Kraken of The Sky	\$5,300.00	5300
Midnight Sun Solar Rayce Car Team	147	MS XIV Electrical System	\$8,000.00	6950
WATonomous	150	WATonomous W21 WEEF Proposal	\$2,180.00	1480
University of Waterloo Formula Motorsports	153	UWFM Winter 2021 for 2022 Season	\$8,400.00	8300
Industry 4.0 Design Team	163	Proposal for Hardware/Software for Industry 4.0 Case Competitions	\$1,899.00	1250
WARG	167	WARG Winter 2021 WEEF Proposal	\$3,860.00	2700
Engineers Without Borders - University of Waterloo Chapter	168	Interactive Virtual Education Hardware	\$5,510.00	2650
WatLock	173	W21 WatLock WEEF Proposal Presentation	\$1,629.01	1529.01
Sedra Student Design Centre	174	PCB Assembly Station Equipment	\$20,000.00	11000
Waterloo Formula Electric	175	Waterloo Formula Electric Funds Proposal Winter 2021	\$4,846.00	4846
			<b>Total</b>	<b>66555.01</b>
			\$83,816.73	
Reallocation				Allocated
University of Waterloo Nanorobotics Group (UWNRG)	146	University of Waterloo Nanorobotics Group (UWNRG) Winter 2021 WEEF Proposal	\$687.50	687.5

	Total	ACER	Miscellaneous and Student Teams
Requested	304959.22	66.52%	33.48%
Allocated	160000.00	50.0%	50.0%
<b>Faculty</b>		<b>Student Teams &amp; Misc.</b>	
<b>\$80,000.00</b>		<b>\$80,000.00</b>	