

Project Status Letter Week 12

Covering Period from 11/11/2018 to 11/18/2018

Prepared by Alex Kmetz and Katie Lee

DYNO Integration Action Tracking

Task / Item	In Progress Projected (%)	In Progress Actual (%)	Complete	Dependencies
Motor Spinning in Dyno Room	50.00%	50.00%	No	Motor Purchased Motor Controller Purchased Pulley / Shaft Fabricated Motor Installed in Motor Mount MCS Installed in Fixture Pulley / Shaft Connected to Motor
Motor Purchased	67%	67%	No	
Motor Controller Purchased	100%	100%	Yes	
Motor Controller Connected to TSI, Cooling, and Motor in Dyno Room	50.00%	33.30%	No	Motor Controller Purchased MCS / TSI / Cooling Fixture Fabricated TSI Board Complete TSI Mounting Plate Complete
Motor Mount Fabricated	67%	33%	No	
Motor Installed in Motor Mount in Dyno Room	66.67%	50.00%	No	Motor Purchased Motor Mount Fabricated
Pulley / Shaft Fabricated	40%	20%	No	
Pulley / Shaft Connected to Motor and Mounted in Dyno Room	45.45%	27.27%	No	Motor Purchased Pulley / Shaft Fabricated
MCS / TSI / Cooling Fixture Fabricated	100%	33%	No	
Pedal Cluster Fabricated	0%	0%	No	
Dyno Room Testing Plan Complete	100%	0%	No	
Dyno Room Wiring Diagram Complete	100%	100%	Yes	
GLV Board Manufactured	85.71%	85.71%	No	
GLV Mounting Plate Manufactured	66.67%	66.67%	No	
Safety Loop Testing Panel Mounted in Dyno Room Rack	100%	60%	No	
Safety Loop Functional In Dyno Room	0%	0%	No	GLV Board Manufactured
TSI Board Manufactured	26.67%	20.00%	No	
TSI Mounting Plate Manufactured	66.67%	67%	No	

TSI Throttle / Brake Control Panel Manufactured	50.00%	25.00%	No	TSI Board Manufactured TSI Mounting Plate Manufactured
Cooling Loop Filled with Water and Tested For Leaks	66.67%	66.67%	No	
Cooling System Mounted on Fixture in Dyno Room	75%	25%	No	MCS / TSI / Cooling Fixture Fabricated
Cooling System Connected to MCS and Motor in Dyno Room	63%	50%	No	MCS / TSI / Cooling Fixture Fabricated
Cooling System Connected to TSI in Dyno Room	80%	20%	No	MCS / TSI / Cooling Fixture Fabricated
TSV Packs Manufactured	30%	10%	No	
TSV Packs Connected to Motor Controller in Dyno Room	0%	0%	No	
TSV CellMan Boards Fabricated	33%	22%	No	
TSV PackMan Boards Fabricated	25%	0%	No	
TSV SegMan Boards Fabricated	29%	0%	No	
				TSV Packs Manufactured PackMan Boards Fabricated CellMen Boards Fabricated SegMen Boards Fabricated Motor Controller Purchased Motor Purchased
TSV Powering Motor via Motor Controller	0%	0%	No	
SCADA Recording Data and Writing to a File	50.00%	38%	No	
SCADA Displaying Data to Rack Monitor in Dyno Room	75%	75%	No	
SCADA Communicating with GLV in Dyno Room	50%	0%	No	GLV Board and Mounting Plate Integrated
SCADA Communicating with TSI in Dyno Room	50%	25%	No	TSI Board and Mounting Plate Integrated
				TSV Packs Manufactured PackMan Boards Fabricated CellMen Boards Fabricated SegMen Boards Fabricated
SCADA Communicating with TSV in Dyno Room	0%	0%	No	
SCADA Communicating with Motor Controller in Dyno Room	50%	50%	No	
All Connecting Wires Produced with Correct Connector Types	17%	8%	No	
All Subsystems fully wired in Dyno Room	0%	0%	No	Dyno Room Wiring Diagram Complete
All Tests According to Test Plan Run in Dyno	0%	0%	No	Dyno Room Testing Plan

Room				Complete
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For more data, visit website using link below:

https://sites.lafayette.edu/motorsports/files/2018/11/Week_12_DYNO_Progress.pdf

Project Item Completion Chart:

Team	Tasks Completed	Tasks Planned for Next Week	Proposed Changes	Overdue WBS Items
VSCADA	<p>Sam: SCADA.8.13 - Demo of System Reaction of Data (Blink LED, etc)</p> <p>Zian: SCADA.7.1 - RTC Purchased and Acquired</p> <p>SCADA.8.12 - Demo of Calibrated Data being Written to a File</p>	<p>Sam: SCADA.3.1 - VSCADA and GLV Connected via CAN and GPIO</p> <p>SCADA.3.2 - VSCADA Receiving Data from GLV Sensors</p> <p>Zian: SCADA.7.2 - RTC Integrated with SCADA</p> <p>Yuqiu: SCADA.2.1 - VSCADA Communicating with TSI over CAN</p>	none	<p>Zian: SCADA.7.2 - RTC Integrated with SCADA</p> <p>Sam: SCADA.3.1 - VSCADA and GLV Connected via CAN and GPIO</p> <p>SCADA.3.2 - VSCADA Receiving Data from GLV Sensors</p> <p>Yuqiu: SCADA.2.1 - VSCADA Communicating with TSI over CAN</p>
TEST	none	<p>Hayden: TEST.1.1 - Motor Testing Plan</p> <p>TEST.2.1 - GLV Testing Plan</p> <p>TEST.3.1 - TSI Testing Plan</p> <p>TEST.4.1 - TSV Testing Plan</p> <p>TEST.5.1 - SCADA Testing Plan</p> <p>TEST.6.1 - DYNO Integration Testing Plan</p> <p>Alex: TEST.6.1 - DYNO Integration Testing Plan</p>	none	<p>Hayden: TEST.1.1 - Motor Testing Plan</p> <p>TEST.2.1 - GLV Testing Plan</p> <p>TEST.3.1 - TSI Testing Plan</p> <p>TEST.4.1 - TSV Testing Plan</p> <p>TEST.5.1 - SCADA Testing Plan</p> <p>TEST.6.1 - DYNO Integration Testing Plan</p> <p>Alex: TEST.6.1 - DYNO Integration Testing Plan</p>

		Katie: TEST.6.1 - DYNO Integration Testing Plan		Katie: TEST.6.1 - DYNO Integration Testing Plan
GLV	<p>Robson: GLV.2.4 - Left Side Panel Fabricated and Wired with Needed Buttons / Switches</p> <p>GLV.2.8 - Right Side Panel Fabricated and Wired with Needed Buttons / Switches</p> <p>GLV.6.4 - Dashboard Panel Fabricated and Wired with Needed Buttons / Switches</p>	<p>Max: GLV.4.3 - GLV External Wiring Delivered and Approved</p> <p>Robson: GLV.2.9 - Left Side Panel Installed in Dyno Room</p> <p>GLV.2.10 - Right Side Panel Installed in Dyno Room</p> <p>GLV.6.5 - Dashboard Panel Installed in Dyno Room</p>	none	<p>Max: GLV.3.2 - Dyno Power Supply Safety Loop On/Off Mechanism Delivered</p> <p>GLV.3.3 - Left Side Panel Connected to GLV In Dyno Room</p> <p>Robson: GLV.3.1 - Dyno Safety Loop Block Diagram Complete and Submitted</p> <p>GLV.3.2 - Dyno Power Supply Safety Loop On/Off Mechanism Delivered</p> <p>GLV.3.3 - Left Side Panel Connected to GLV In Dyno Room</p> <p>GLV.3.4 - Right Side Panel Connected to GLV In Dyno Room</p> <p>GLV.3.5 - Dyno Power Supply Connected to GLV Safety Loop</p> <p>GLV.2.9 - Left Side Panel Installed in Dyno Room</p> <p>GLV.2.10 - Right Side Panel Installed in Dyno Room</p>

				GLV.6.5 - Dashboard Panel Installed in Dyno Room
TSI	<p>Xiaonan TSI.1.2 - TSI Circuit Schematic Delivered and Approved</p> <p>Tianyu: TSI.1.4 - TSI PCB BoM Purchase Order Approved and Purchased</p>	<p>Tianyu: TSI.1.8 - Precharge Circuitry Incorporated</p> <p>TSI.1.3 TSI PCB Layout Complete and Approved</p> <p>Antonio: TSI.5.8 - TSI ICD Delivered</p> <p>TSI.5.9 - TSI Wiring Diagram Delivered</p> <p>Hongbo: TSI.2.4 - UART for firmware completed</p> <p>TSI.2.6 - TSI Firmware state machine completed</p> <p>Yuqiu: TSI.1.3 - TSI PCB Layout Delivered and Approved</p> <p>TSI.2.5 - Firmware Logic / State Machine Delivered and Approved</p> <p>TSI.2.9 - VSCADA I2C Communication Complete</p> <p>TSI.2.11 - CANBus / TSI Integration Complete</p> <p>Xiaonan:</p>	none	<p>Tianyu: TSI.1.3 - TSI PCB Layout Complete and Approved</p> <p>TSI.1.8 - Precharge Circuitry Incorporated</p> <p>TSI.6.1 - Mechanical Drawing of TSI Enclosure Delivered and Approved</p> <p>Antonio: TSI.5.8 - TSI ICD Delivered</p> <p>TSI.5.9 - TSI Wiring Diagram Delivered</p> <p>Katie: TSI.1.3 - TSI PCB Layout Delivered and Approved</p> <p>Yuqiu: TSI.2.5 - Firmware Logic / State Machine Delivered and Approved</p> <p>TSI.2.9 - VSCADA I2C Communication Complete</p> <p>TSI.2.11 - CANBus / TSI Integration Complete</p> <p>Xiaonan: TSI.1.3 -</p>

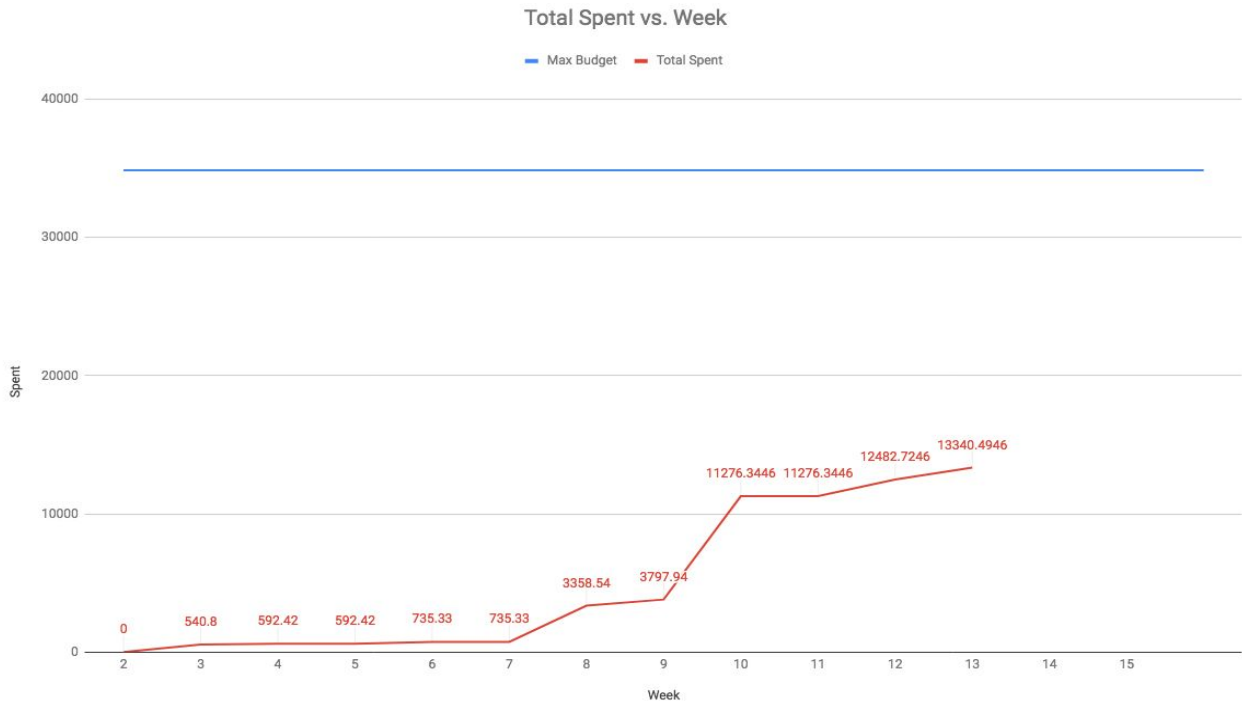
		<p>TSI.1.3 - TSI Circuit Layout Delivered and Approved</p> <p>Katie: TSI.1.3 - TSI PCB Layout Delivered and Approved</p> <p>Yishak: TSI.3.1 - Verify and correct 2018 BLock and Wiring Diagram</p>		<p>TSI Circuit Layout Delivered and Approved</p>
TSV	<p>Yishak: TSV.2.1 - CellMan Block Diagram Delivered and Approved</p> <p>TSV.2.2 - CellMan Circuit Schematic Delivered and Approved</p>	<p>Hayden: TSV.1.2 - Pack Mechanical Drawing Submitted and Accepted</p> <p>TSV.3.1 - PackMan Block Diagram Delivered and Approved</p> <p>TSV.3.2 - PackMan Circuit Schematic Delivered and Approved</p> <p>Yishak: TSV.1.1 - Pack High Level Electrical Block Diagram Delivered and Accepted</p> <p>TSV.1.3 - Pack BoM Purchase Order Approved and Purchased</p> <p>TSV.4.1 - SegMan Block Diagram Delivered and Approved</p> <p>TSV.3.1 - PackMan Block Diagram Delivered</p>	none	<p>Alex: TSV.3.1 - PackMan Block Diagram Delivered</p> <p>Hayden: TSV.4.1 - PackMan Block Diagram Delivered and Approved</p> <p>TSV.4.2 - PackMan Circuit Schematic Submitted and Accepted</p> <p>Yishak: TSV.1.1 - Pack High Level Electrical Block Diagram Delivered and Accepted</p> <p>TSV.1.3 - Pack BoM Purchase Order Approved and Purchased</p> <p>TSV.2.1 - CellMan Block Diagram Delivered and Approved</p> <p>TSV.2.4 - CellMen BoM Purchase Order</p>

		<p>and Approved</p> <p>Weston: TSV.1.2 - Pack BoM Purchase Order Approved and Purchased</p> <p>TSV.1.6 - Pack Testing Plan Submitted and Approved</p> <p>TSV.3.1 - PackMan Block Diagram Submitted and Approved</p> <p>Alex: TSV.3.1 - PackMan Block Diagram Delivered</p>		<p>Approved and Purchased</p> <p>TSV.4.1 - SegMan Block Diagram Delivered and Approved</p> <p>Weston: TSV.1.2 - Pack BoM Purchase Order Approved and Purchased</p> <p>TSV.1.6 - Pack Testing Plan Submitted and Approved</p>
Cooling	<p>Hongbo: COOL.1.1 - Mechanical Drawing of Mounting Delivered</p>	<p>Hongbo: COOL.1.4 - Controller Algorithm Delivered and Approved</p> <p>COOL.4.2 - Cooling Wiring Diagram Delivered</p>	none	none
Interconnect	<p>Drew:</p>	<p>Drew: WIRE.2.3 - TSI-MCS Wires Complete</p> <p>WIRE.2.4 - TSI-Cooling Wires Complete</p> <p>Hayden: WIRE.2.3 - TSI-MCS Wires Complete</p>	none	<p>Drew: WIRE.2.3 - TSI-MCS Wires Complete</p> <p>WIRE.2.4 - TSI-Cooling Wires Complete</p> <p>WIRE.2.12 - Safet Loop Panels - Dyno Supply Wiress Complete</p>
Mech	<p>Adam: Finished Motor shaft calcs and submitted design to shop</p> <p>Conducted lifespan calcs</p>	<p>David: Send out Frame to VR3 for manufacturing</p> <p>Nick:</p>	none	none

	<p>for motor bearings</p> <p>Hayden: PART.4.2 - Motor Controller Acquired</p> <p>Nick: MCS and TSI frames finished</p> <p>Relay and Cooling mounting boards complete (will be approved after Thanksgiving)</p>	<p>Redesign TSI mounting plate to fit new PCB</p> <p>Continuing drivetrain design</p>		
Management		<p>Alex: M.1.4 - Program Submission</p> <p>CDR Proposal</p> <p>Update WBS to better reflect SMART goals</p> <p>Katie: CDR Proposal</p> <p>Update WBS to better reflect SMART goals</p>	none	none

Purchasing Summary from Previous Week:

Sub-system	Allocated Budget	Total Spent	Budget Remaining	Percentage Spent
Brakes	3,500.00	0.00	3,500.00	0.00%
Chassis/Body	5,000.00	0.00	5,000.00	0.00%
Cooling	620.00	17.17	602.83	2.77%
GLV	780.00	918.89	-138.89	117.81%
Interconnect	1,500.00	756.00	744.00	50.40%
Motor	4,000.00	3,823.43	176.57	95.59%
Pedal/Controls	2,000.00	0.00	2,000.00	0.00%
Steering	2,500.00	0.00	2,500.00	0.00%
Suspension	2,200.00	0.00	2,200.00	0.00%
TSI/MCS	1,500.00	4,046.41	-2,546.41	269.76%
TSV	4,187.00	1,109.88	3,077.12	26.51%
VSCADA / DYNO	525.00	10.50	514.50	2.00%
Shipping/Tax	4,246.80	358.21	3,888.59	8.43%
Registration	2,300.00	2,300.00	0.00	100.00%
Overall	34,858.80	13,340.49	21,518.31	38.27%



Purchase Orders:

(Purchases we forgot to include from last week. We have included the net purchase in this PSL.)

Drivetrain	McMaster-Carr	1	8961K15	Steel DIN 3 Rail, 7.5mm Deep, 1m Long	\$5.27	\$5.27	11/7/2018
Drivetrain	McMaster-Carr	11	47065T142	Steel End-Feed Fastener, 1/4"-20 Thread for T-Slotted Framing	\$2.30	\$25.30	11/7/2018
Drivetrain	Midwest Steel and Aluminum	1	6061	1 inch thick 11" x 11" Plate	\$58.13	\$58.13	11/6/2018
Drivetrain	McMaster-Carr	4	47065T278	Silver Tee Surface Bracket for 1" High Single Rail	\$7.95	\$31.80	11/6/2018
Drivetrain	McMaster-Carr	4	47065T255	Silver Straight Surface Bracket, 2" Long for 1" High Rail	\$6.07	\$24.28	11/6/2018

DATE: 11/16/2018

ECX Department Material Request

Course: ECR-01
Professor: [Name]

Days: Monday - Friday
Class Number: 11

Requested By: Name: [Name]
Email: [Email]
Phone: [Phone]

Number: [Number]
Date: [Date]
Place: [Place]
Ship By: [Ship By]

#	Quantity	Material Part	Description	Unit Price	Total Price	Brand
1	1	401000-001	401000-001	1.00	1.00	
2	1	401000-002	401000-002	1.00	1.00	
3	1	401000-003	401000-003	1.00	1.00	
4	1	401000-004	401000-004	1.00	1.00	
5	1	401000-005	401000-005	1.00	1.00	
6	1	401000-006	401000-006	1.00	1.00	
7	1	401000-007	401000-007	1.00	1.00	
8	1	401000-008	401000-008	1.00	1.00	
9	1	401000-009	401000-009	1.00	1.00	
10	1	401000-010	401000-010	1.00	1.00	
11	1	401000-011	401000-011	1.00	1.00	
12	1	401000-012	401000-012	1.00	1.00	
13	1	401000-013	401000-013	1.00	1.00	
14	1	401000-014	401000-014	1.00	1.00	
15	1	401000-015	401000-015	1.00	1.00	
16	1	401000-016	401000-016	1.00	1.00	
17	1	401000-017	401000-017	1.00	1.00	
18	1	401000-018	401000-018	1.00	1.00	
19	1	401000-019	401000-019	1.00	1.00	
20	1	401000-020	401000-020	1.00	1.00	
21	1	401000-021	401000-021	1.00	1.00	
22	1	401000-022	401000-022	1.00	1.00	
23	1	401000-023	401000-023	1.00	1.00	
24	1	401000-024	401000-024	1.00	1.00	
25	1	401000-025	401000-025	1.00	1.00	
26	1	401000-026	401000-026	1.00	1.00	
27	1	401000-027	401000-027	1.00	1.00	
28	1	401000-028	401000-028	1.00	1.00	
29	1	401000-029	401000-029	1.00	1.00	
30	1	401000-030	401000-030	1.00	1.00	
31	1	401000-031	401000-031	1.00	1.00	
32	1	401000-032	401000-032	1.00	1.00	
33	1	401000-033	401000-033	1.00	1.00	
34	1	401000-034	401000-034	1.00	1.00	
35	1	401000-035	401000-035	1.00	1.00	
36	1	401000-036	401000-036	1.00	1.00	
37	1	401000-037	401000-037	1.00	1.00	
38	1	401000-038	401000-038	1.00	1.00	
39	1	401000-039	401000-039	1.00	1.00	
40	1	401000-040	401000-040	1.00	1.00	
41	1	401000-041	401000-041	1.00	1.00	
42	1	401000-042	401000-042	1.00	1.00	
43	1	401000-043	401000-043	1.00	1.00	
44	1	401000-044	401000-044	1.00	1.00	
45	1	401000-045	401000-045	1.00	1.00	
46	1	401000-046	401000-046	1.00	1.00	
47	1	401000-047	401000-047	1.00	1.00	
48	1	401000-048	401000-048	1.00	1.00	
49	1	401000-049	401000-049	1.00	1.00	
50	1	401000-050	401000-050	1.00	1.00	
51	1	401000-051	401000-051	1.00	1.00	
52	1	401000-052	401000-052	1.00	1.00	
53	1	401000-053	401000-053	1.00	1.00	
54	1	401000-054	401000-054	1.00	1.00	
55	1	401000-055	401000-055	1.00	1.00	
56	1	401000-056	401000-056	1.00	1.00	
57	1	401000-057	401000-057	1.00	1.00	
58	1	401000-058	401000-058	1.00	1.00	
59	1	401000-059	401000-059	1.00	1.00	
60	1	401000-060	401000-060	1.00	1.00	
61	1	401000-061	401000-061	1.00	1.00	
62	1	401000-062	401000-062	1.00	1.00	
63	1	401000-063	401000-063	1.00	1.00	
64	1	401000-064	401000-064	1.00	1.00	
65	1	401000-065	401000-065	1.00	1.00	
66	1	401000-066	401000-066	1.00	1.00	
67	1	401000-067	401000-067	1.00	1.00	
68	1	401000-068	401000-068	1.00	1.00	
69	1	401000-069	401000-069	1.00	1.00	
70	1	401000-070	401000-070	1.00	1.00	
71	1	401000-071	401000-071	1.00	1.00	
72	1	401000-072	401000-072	1.00	1.00	
73	1	401000-073	401000-073	1.00	1.00	
74	1	401000-074	401000-074	1.00	1.00	
75	1	401000-075	401000-075	1.00	1.00	
76	1	401000-076	401000-076	1.00	1.00	
77	1	401000-077	401000-077	1.00	1.00	
78	1	401000-078	401000-078	1.00	1.00	
79	1	401000-079	401000-079	1.00	1.00	
80	1	401000-080	401000-080	1.00	1.00	
81	1	401000-081	401000-081	1.00	1.00	
82	1	401000-082	401000-082	1.00	1.00	
83	1	401000-083	401000-083	1.00	1.00	
84	1	401000-084	401000-084	1.00	1.00	
85	1	401000-085	401000-085	1.00	1.00	
86	1	401000-086	401000-086	1.00	1.00	
87	1	401000-087	401000-087	1.00	1.00	
88	1	401000-088	401000-088	1.00	1.00	
89	1	401000-089	401000-089	1.00	1.00	
90	1	401000-090	401000-090	1.00	1.00	
91	1	401000-091	401000-091	1.00	1.00	
92	1	401000-092	401000-092	1.00	1.00	
93	1	401000-093	401000-093	1.00	1.00	
94	1	401000-094	401000-094	1.00	1.00	
95	1	401000-095	401000-095	1.00	1.00	
96	1	401000-096	401000-096	1.00	1.00	
97	1	401000-097	401000-097	1.00	1.00	
98	1	401000-098	401000-098	1.00	1.00	
99	1	401000-099	401000-099	1.00	1.00	
100	1	401000-100	401000-100	1.00	1.00	

Shipping Total: \$100.00
Grand Total: \$100.00

Department Approval: _____
Date: _____

11/16/2018						
ECE Department Material Request						
Course: ECE 491				Req Number: 23		
Professor: Nadovich						
Requested By				Vendor: Amazon		
Name Robson Adem				Web Site amazon.com		
Email ademr@lafayette.edu				Phone 5105252328		
Phone 4845919265				Ship By: Ground		
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	https://amzn.to/2qOjpYB	WINGONEER YF-S201 1-30L/min Water Flow Hall Counter / Sensor Water control Water Flow Rate Switch Flow Meter Flowmeter Counter	\$8.99	\$8.99	
2	2	https://amzn.to/2Dl4S9m	DIN Rail Terminal Blocks, 10-22 AWG, 30 Amp, 600 Volt	\$17.80	\$35.60	
					Shipping Fees	\$0.00
					Grand Total:	\$44.59
Instructor Approval:						
Department Approval:						
(Over \$500)						

11/16/2018						
ECE Department Material Request						
Course: ECE 491				Req Number: 24		
Professor: Nadovich						
				http://www.gmw.com/magnetic_sensors/ametes/BBM_pricing.html		
Requested By				Vendor: GMW Associates		
Name Robson Adem				Web Site gmw.com		
Email ademr@lafayette.edu				Phone 650-802-8292		
Phone 4845919265				Ship By: Ground		
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	BBM-01	Bus Bar Module Current Sensor, 12-160mm Bus Bar widths	\$40.00	\$40.00	
					Shipping Fees	\$0.00
					Grand Total:	\$40.00
Instructor Approval:						
Department Approval:						
(Over \$500)						