

Project USURPER: Undergrad Student Rocketry Propulsion, Payload Ejection and Recovery

	SEDS	oject Start Date	6/28/2019 (Friday)		Display Week16		Week 16 7 Oct 2019		eek 17 Oct 2019	Week 18 21 Oct 2019	Week 19 28 Oct 2019		Week 20 4 Nov 2019	Week 21 11 Nov 2019	Week 22 18 Nov 2019	Week 23 25 Nov 2019	
NUMBER	TASK		Responsible Engineer	START	END	DAYS	% DONE	7 8 9 10 11 12 13	3 14 15 16	17 18 19	20 21 22 23 24 25 26 2	27 28 29 30 31	1 2 3	4 5 6 7 8 9	10 11 12 13 14 15 16 17	18 19 20 21 22 23	
1	Propulsion		Charlie														
1.1	Runaway V1 Hot-Fire 4		Charlie	Mon 9/09/19	Thu 10/10/19	31	90%										
1.2	Runaway V2 Project		Charlie			0	0%										
1.2.1	Design Full Assembly			Tue 10/01/19	Fri 10/25/19	24	40%										
1.2.2	Manufacturing of all Components			Fri 10/25/19	Mon 11/11/19	17	0%										
1.2.3	Assembly, Molding and Test Prep			Mon 11/11/19	Mon 11/18/19	7	0%									///	
1.2.4	Hot-Fire Test 1			Mon 11/18/19	Fri 11/22/19	4	0%										
1.2.5	Hydrostatic Testing			Fri 11/22/19	Wed 12/04/19	12	40%									<u> </u>	
1.3	Flow Regulation V2 - Hardware		Zach	Tue 10/01/19		31	40%						///				
				Tue 10/01/19	11111/01/19	31	0%										
1.4	Runaway V3 Project		Charlie												· · · · · · · · · · · · · · · · · · ·		
1.4.1	Design Full Assembly				Wed 12/04/19	21	0%										
1.4.2	Manufacturing of all Components			Wed 12/04/19	Fri 12/20/19	16	0%										
1.4.3	Assembly, Molding and Test Prep			Fri 12/20/19	Mon 1/06/20	17	0%										
1.4.4	Hot-Fire Test 1			Mon 1/06/20	Thu 1/09/20	3	0%										
1.5	Runaway V4 Project - Competiti	on Design	Charlie				0%										
1.5.1	Design Full Assembly			Sat 1/25/20	Fri 2/14/20	20	0%										
1.5.2	Manufacturing of all Components			Fri 2/14/20	Tue 2/25/20	11	0%										
1.5.3	Assembly, Molding and Test Prep			Tue 2/25/20	Fri 3/06/20	10	0%										
1.5.4	Hot-Fire Test 1			Fri 3/06/20	Mon 3/09/20	3	0%										
1.6	Hydrostatic Test Rig		Charlie				0%										
1.6.1	Design Full Assembly			Thu 10/10/19	Fri 10/25/19	15	0%	W///////									
1.6.2	Purchasing and Manufacturing			Fri 10/25/19	Tue 11/05/19	11	0%	9111111111									
1.6.3	Assembly and Calibration			Tue 11/05/19	Mon 11/11/19	6	0%										
1.6.4	Run Test			Mon 11/11/19		4	0%										
2	Propulsion - Gimbal		Andrew														
3	Frame	1	s C. Darren O. N	late G.													
3.1	USURPER CAD			Mon 8/26/19	Wed 5/20/20	268	20%										
3.2	USURPER CAD V1			Mon 8/26/19	Tue 9/24/19	29	100%										
3.3	USURPER CAD V2			Wed 9/25/19	Thu 10/17/19	22	80%										
3.3.1	Aquire Carbon Fiber Tank Model			Wed 10/09/19	Thu 10/17/19	8	25%			<i>(</i> //).							
3.3.2	Oxidizer Tank Integration			Wed 10/09/19	Thu 10/17/19	8	25%										
3.3.3	Hackathon Goals			Tue 10/08/19	Thu 10/17/19	9	75%		/////////////////////////////////////	(I)							
3.4	USURPER CAD V3			Fri 10/18/19	Thu 10/31/19	13	0%										
3.4.1	Combustion Chamber Integration (Drawin	ngs)		Fri 10/18/19	Thu 10/31/19	13	0%										
3.4.2	Nos Tank Integration (Drawings)			Fri 10/18/19	Thu 10/31/19	13	0%										
3.4.3	Propulsion / Avionices Access (Drawings			Fri 10/18/19	Thu 10/31/19	13	0%										
3.4.4	Nose Cone (Drawings / Contact Durham	Boat)		Fri 10/18/19	Thu 10/31/19	13	0%			<i>"////////</i>							
3.5	USURPER CAD V4	Doot\		Fri 11/01/19	Fri 12/20/19	49	0%										
3.5.1	Nose Cone (Drawings / Contact Durham		*n\	Fri 11/01/19 Fri 11/01/19	Fri 12/20/19	49 49	0% 0%										
3.5.2	Recovery System Drawings (Dependent of	OLI AVOLIICS DESIG	9117	FII 1 1/01/19	Fri 12/20/19	49	0%										



Week 16 Week 19 Week 21 Project Start Date 6/28/2019 (Friday) Display Week Week 17 Week 18 Week 20 Week 22 Week 23 7 Oct 2019 14 Oct 2019 21 Oct 2019 28 Oct 2019 4 Nov 2019 11 Nov 2019 18 Nov 2019 25 Nov 2019 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 1 Responsible NUMBER TASK START END DAYS % DONE M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S 0% Fri 12/20/19 3.6 Aquire All Frame Materials Wed 10/09/19 72 3.6.1 Durham Boat Composite Body Exterior Wed 10/09/19 Fri 12/20/19 72 0% 3.6.2 Durham Boat Requirements and Drawings Wed 10/09/1 Wed 11/20/19 42 0% 3.6.3 Advanced Automation Requirements and Drawings (Possibility) Wed 10/09/1 Fri 12/20/19 72 0% 3.7 SPRING 2020 Wed 1/01/20 Fri 1/31/20 30 0% 3.7.1 Complete Unfinished Machining from Fall 2019 Wed 1/01/20 Fri 1/31/20 30 0% 3.7.2 Test General Assembly Wed 1/01/20 Fri 1/31/20 30 0% 3.7.3 Iterate Failed Designs Wed 1/01/20 140 0% Wed 5/20/20 3.7.4 Design Interior Structures Wed 1/01/20 Wed 5/20/20 140 0% **Avionics** Lucas Runaway V1 Hot-Fire 4 Mon 9/09/19 Fri 9/27/19 18 75% 4.1 4.1.1 Verify & Tune Current System Mon 9/09/19 Fri 9/20/19 11 4.2 Runaway V2 Project Mon 9/09/19 Fri 11/08/19 60 0% Design Electrical System for Propulsion Mon 9/09/19 25 0% 4.2.1 Fri 10/04/19 4.2.2 Order Electrical Components Fri 10/04/19 Sat 10/05/19 90% 4.2.3 Assemble and Test Electrical System Mon 10/14/19 Fri 11/22/19 39 0% 4.2.4 Design Revision and Optimization Fri 11/22/19 Thu 1/09/20 48 0% Fri 9/27/19 Fri 12/06/19 70 0% 4.3 Recovery System 4.3.1 Design Recovery System Fri 9/27/19 Mon 10/28/19 31 0% 4.3.2 Order Electrical/Physical Components Mon 10/28/19 Fri 11/01/19 0% 4.3.3 Assemble & Test Recovery System Mon 11/04/19 Fri 12/06/19 32 0% Fri 12/06/19 Design Revision and Optimization 60 4.3.4 Tue 2/04/20 0% 4.4 Payload Project Tue 8/27/19 Thu 4/16/20 233 0% Choose Payload Topic Tue 8/27/19 Tue 2/04/20 161 0% 4.4.1 Design of Payload Tue 2/04/20 Tue 2/25/20 0% 4.4.2 21 4.4.3 Order Components Tue 2/25/20 Fri 2/28/20 3 0% 4.4.4 Assembly and Test Payload Mon 3/02/20 Mon 3/16/20 14 0% 4.4.5 Design Revision and Optimization Mon 3/16/20 Thu 4/16/20 31 0% 4.5 Telemetry Mon 11/11/19 109 0% Fri 2/28/20 Research Telemetry Systems Mon 11/11/19 Mon 12/16/19 0% 4.5.1 35 4.5.2 Design Telemetry System Sun 12/01/19 Thu 1/30/20 60 0% 4.4.3 Order Components Thu 1/30/20 Fri 1/31/20 0% 4.5.3 Assemble and Test Electrical System Mon 2/03/20 Fri 2/07/20 4 0% 4.5.4 Design Revision and Optimization Mon 2/03/20 Fri 2/28/20 25 0% 3 Operations Fri 11/29/19 3.1 Fri 11/29/19 Full Team Initial Design Review 0