Brigham Young University
AUVSI Capstone Team (Team 45)

Unmanned Ground Vehicle Requirements Matrix

ID	Rev.	Date	Description	Author	Checked By
RM-001	0.1	10-23-2018	Initial requirements	Jacob Willis	Brady Moon
RM-001	1.1	10-26-2018	Better performance measures	Jacob Willis	Kameron Eves
RM-001	1.2	10-26-2018	Edits after design review	Brady Moon & John Akagi	Kameron Eves

Product: UAV
Subsystem: PAYLOAD/Unmanned Ground Vehicle (UGV)

Notes:
*normalized by the fusalage diameter cubed

Target Design Requirements	Importance	Drop mechanism mass (kg)	Weight mechanism can support (N)	Aircraft internal volume consumed* (%)	Stowed drop mechanism drag (N)	Maximum landing velocity (m/s)	UGV landing distance from target (m)	Rule violations (cnt)
		1	2	3	4	5	6	7
1 Complies with competition rules	5	●						●
2 Capable of lowering the payload to the ground	5	●	●					
3 Lands UGV within landing zone	3					●	●	
5 Delivers UGV without damage	3		●			●		●
6 Deployable from airframe	4			●	●			
7 Does not interfere with takeoff/landing	3	●			●			
8 Causes minimal aerodynamic interference	3				●			
9 Drop mechanism does not interfere with UGV movement	2					●	●	
Upper Acceptable		0.6	-	50	1.5	5	22	1
Ideal		0.1	1.3	0	0.3	1	0	0
Lower Acceptable		0	0.6	-	0	0	-	-

Figure 1: Requirements matrix for the subsystem which will deliver the UGV to the ground.