Design Requirement		
Date:		
Design Project Title:	Auto-Pilot Car	
Team Name:	Summit	
Team Advisor	Dr. Grand Master	
Team Assistant	Derrick Dale	
Project's Long Term Goal	Development of a driverless car	
Project's Current Academic Year Goal	Development of a Lane Departure Warning System	
Team Members (Design Class)		
Team Members (Others)		
1-sentence Problem Statement		
Requirements	**Items**	**Descriptions**
1. Product Specification (or Software Requirement Specification)	System Initiation and Self-Test Time	Within 30 seconds of vehicle start
	System Operational Minimum Vehicle	when the vehicle is traveling at or above a speed of 37 mph
	Warning Response Time from Departure	Max 1 second
	System Deactivation Condition	When vehicle's turn signal is activated
	Lane Boundary for Issuing Warning	±0.1 meter (±4 inches) from the warning thresholds.
	Alert Sound	audio sources of at least 1.5mW
	Alert light	Indicator lights no brighter than 80candela
	Alert Vibration	vibrational devices with 3600 RPM with deactivation option by driver.
	Weight of the final product	Max 10 lbs
2. Contraints	**Cost**	Max $450
	Time	Be completed and ready for testing by 04/10/2020
	Environmental Social Responsibility	Alert method (audio/visual and vibration)should be culture-responsive for global acceptance

3. Compliance to regulations and standards	**Standard**	SAE Standard J1455, “Joint SAE/ TMC Recommended Environmental Practices for Electronic Equipment Design (Heavy-Duty Trucks)”
	Standard	SAE Standard J1113, “Electromagnetic Compatibility Measurement Procedures and Limits for Vehicle Components (Except Aircraft) (60 Hz to 18 GHz)”
	Patent Intellectual Property	Must not infringe Ford Motor's Patent and Design patents US 1234568.