INSTRUCTIONS:
Fill out the hazard analysis and risk assessment below.
HA-001 should be for the lane departure warning function as discussed in the lecture.
HA-002 should be for the lane keeping assistance function as discussed in the lecture.
Then come up with your own situations and hazards for the lane assistance system. Fill in
When finished, export your spreadsheet as a pdf file so that a reviewer can easily see your

Hazard ID	Situational Analysis			
	Operational Mode	Operational Scenario	Environmental Details	Situation Details
HA-001	Normal driving	Highway	Rain (slippery road)	High speed
HA-002	Normal driving	Country road	Normal conditions	High speed
HA-003	Normal driving	Highway	Normal conditions	Low speed
HA-004	Normal driving	City road	Snowfall (degraded	Low speed

the HA-003 and HA-004 rows.
work.

			Hazard Identification
Other Details (optional)	**Item Usage (function)**	**Situation Description**	**Function**
	Correctly used	Normal driving on highway in rain	Lane Departure
driver is misusing the	Incorrectly used	Normal driving on country roads during	Lane Keeping
	Correctly used	Normal driving on highway while	Lane Departure
	Correctly used	Normal driving on city road at low speed	Lane Keeping

Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details
Actor effect is	LDW function applies an	Collision with other	High haptic feedback can affect
Function	LKA function is always	Collision with other	Driver misuses LKA function for
Actor action is	LDW function applies an	Collision with other	Delayed haptic feedback can
Actor effect is	LKA function applies less	Collision with other	Less torque causes ego vehicle to

	Hazardous Event Classification		
Hazardous Event Description	**Exposure (of situation)**	**Rationale (for exposure)**	**Severity (of potential harm)**
LDW function applies too high	E3	Driving on highway in rain occurs	S3
LKA function is always on and	E2	Driving on country roads while	S3
LDW function applies an	E4	Driving at low speed on highway	S3
Steering torque from LKA is	E2	Snow is seasonal and occurs a	S1

Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)
Driver is travelling at	C3	Difficult to control steering oscillations at high
Driver is travelling at	C3	Driver's hands are off the wheel at high speeds
Even though ego	C2	Driver able to manuever back to original lane
Driver is travelling at	C1	Speed is low but snow and degraded viewing can

Determination of ASIL and Safety Goals	
ASIL Determination	**Safety Goal**
C	Oscillating steering torque from LDW
B	LKA function shall be time limited and
C	LDW function shall activate within a
QM	Steering torque from LKA shall be