

A BRIEF PROPOSAL OF THESIS /CAPSTONE PROJECT**Semester** 222**1. Thesis/Project title:** Analyse the changes of steering feel in various speed in Toyota VIOS.**2. Advisor's full name:** PhD. Ngô Đắc Việt

PhD. Trần Đăng Long

3. Student's full name:Trịnh Tiến Long**- ID: 1852047****4. Thesis content:****4.1. Type:**☐ A product design☐ A technical evaluation☒ A scientific research☐ Other:**4.2. Objectives & Technical requirements:**

_ Analysis of the complete system dynamics of EPS, and implementation of the EPS simulation model on Matlab/Simulink, with simulation results analysis using Simscape Multibody.

4.3. Core problems to be solved & Solving ideas/methods:

_Build EPS model on Simscape to determine the torque acting on steering wheel with certain steering angle

4.4. Works to be done & Required results:

No.	Works to be done	Required results (<i>Ex: data, equations, models, diagrams, parameters, charts, findings...</i>)
1	Dynamic formula for EPS system	Equation
2	Solidwork model for simscape simulation	Model

4.6. Requested products:

- ☒ Technical report
 ☒ Poster
 ☐ Scientific paper
☐ Software
 ☐ Firmware
 ☒ Numerical model
☐ General layout drawings
 ☐ Detailed drawings
 ☒ Assembly drawings
☐ Others:

4.7. Scope of Thesis/Project:

Components that are not related to the EPS system are ignored.

4.8. Tasks of each team member:

No.	Member's full name	Works assigned
1	Trịnh Tiến Long	Summary the dynamic equation, simulate using simscape multibody

5. Technical strengths of team members and practical opportunities:

_Great skill on summarizing theory

Background knowledge of Matlab Simulink/Simscape, automatic control facility.

6. Technical weaknesses of team members and practical threats:

No.	Technical weakness/ Practical threats	Degree of risk of Thesis/Project failure (Low/Medium/High)	Solutions to overcome
1	Lack of solidwork skill	Medium	Learn how to use program immediately

8. Working plan for 15+1 weeks: (including: tasks to be done; solutions to overcome weakness and threats; mid-term report (X); ...)

[illegible]

4	Summarize dynamic equation, get VIOS steering system parameter							x	x				x				
5	Draw solidwork model								x	x		x	x				
6	Build EPS model on MATLAB													x	x	x	
7	Make poster											x					x
8	Make presentation slides																x
9	Write full report																x

Student:Trịnh Tiến Long

-ID: 1852047

- Signature: Long

Date (dd/mm/yyyy): 24/04/2023

ADVISOR