TN.05

| **HCMC UNIVERSITY OF TECHNOLOGY** | SOCIAL REPUBLIC OF VIETNAM |
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| Faculty of Transportation Engineering | Independence - Freedom - Happiness  **------------------------------------** |

# THESIS ASSIGNMENT

**Student’s full name :** Hồ Bình Minh **Student’s ID : 1852169**

Trịnh Tiến Long **Student’s ID : 1852047**

Đặng Minh Duy **Student’s ID : 1910933**

Nguyễn Nhật Duy **Student’s ID : 1910088**

**Training program :** Automotive Engineering **Class : CC19OTO1/GT19OTO3**

1. **Thesis title :** Modeling and simulation using Matlab/Simulink and its applications in The Electric Power Steering system in VIOS.

1. **Requested content :**

\_ Research how wheel alignment can affect the resistance torque in the steering mechanism especially in the EPS system, model and simulate it by using MATLAB software.

\_ Simulation of motor model and control motor’s moment in MATLAB/Simulink

\_ Determine and simulate the control of the assisting motor and control rules of EPS according to different vehicle speeds and steering wheel’s angles.

\_Build EPS model on Simscape to determine the torque acting on steering wheel with certain steering angle and summary dynamic equation on EPS system

1. **Requested products :**

x Full report x Poster ◻ Scientific paper

◻ Software ◻ Firmware x Numerical model

◻ General layout drawings ◻ Detailed drawings x Assembly drawings

◻ Others:

1. **Date of assignment** *(dd/mm/yyyy)* **: 23//12/2022**
2. **Date of accomplishment** *(dd/mm/yyyy)* **: 23/06/2023**

**The Thesis assignment is approved by the Department of Automotive Engineering.**

| *Date (dd/mm/yyyy) :* …………………..  **Head of Department** | *Date (dd/mm/yyyy) :* …………………..  **Thesis Advisor** |
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