

German University in Cairo

Advanced Mechatronics (MCTR903)

Milestone 2

Milestone Requirements:

1. Simulation:

- Get the mathematical model representing the dynamics of your system and implement the system on MATLAB Simulink.
- Perform open loop simulation on the system.
- Plot system's inputs and outputs.

2. Hardware:

- Perform basic operation of all system's components using the Raspberry Pi. (e.g. Operate motors, get readings from sensors, etc.).

3. Report:

- Build on the previous report submitted in Milestone 1.
- Add a new section titled: "System Model", provide a brief description about the system model.
- Add the mathematical model both in its raw form and in state space representation.
- Explain the equations and how do they reflect on the physical system.
- Add the produced graphs from the simulation, comment on the graphs and on system response.

4. Submission

- Submit a zip file containing:
 - a) Report in PDF file format.
 - b) Simulink files (Please use MATLAB 2022b or earlier versions, files from later versions will not be accepted).
 - c) Produced graphs.
 - d) Narrated video showing hardware operation.
- Link: <https://forms.gle/aMaqfYwhiryoSC1K8>
- Deadline: **Tuesday 24th of October 2023 at (5:00 PM)**