

## Module 3 - Newton's Approach

ME3050 - Dynamics Modeling and Controls

Mechanical Engineering

Tennessee Technological University

### Topic 3 - The Velocity Model

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- Section I
- Section II
- Section III
- Section IV

# Section I

## Section II

### Simple Example: Quarter Car Suspension Model

- Problem Statement - Derive the **equations of motion** using (1) Newton's approach and validate using the (2) Conservation of Energy.
- Assumptions - List the assumptions used in the modeling process.

# Section III

# Section IV