

# Lecture Module - Electrical Systems

ME3050 - Dynamic Modeling and Controls

Mechanical Engineering

Tennessee Technological University

## Topic 2 - First Order Circuits

## Electrical Systems

- Example: RC Circuit
- Assumptions
- Governing Equations
- Model Derivation
- Response Equation

## Example: RC Circuit

## Example: RC Circuit



# Assumptions

# Governing Equations

# Governing Equations



# Governing Equations

# Model Derivation

# Response Equation