

# **UNIT-1**

## **(Lecture-1)**

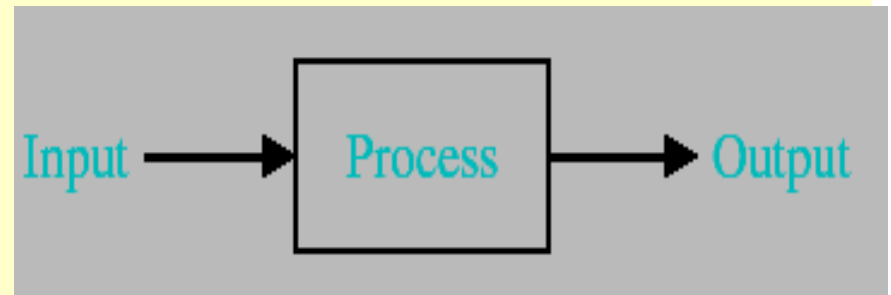
**Basic Components of a control system**

# Introduction

**System** – An interconnection of elements and devices for a desired purpose.

**Control System** – An interconnection of components forming a system configuration that will provide a desired response.

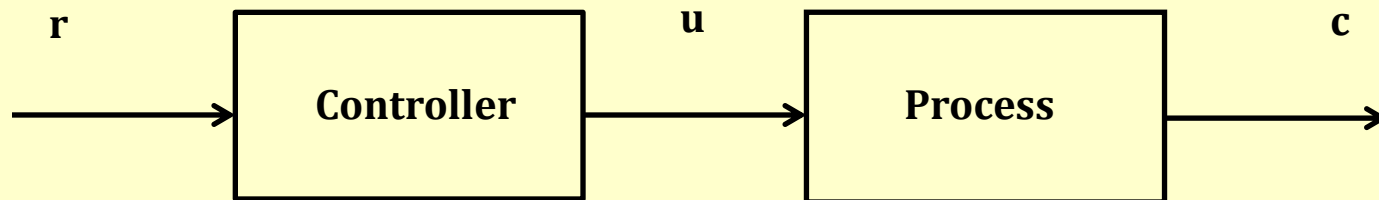
**Process** – The device, plant, or system under control. The input and output relationship represents the cause-and-effect relationship of the process.



Process to be controlled.

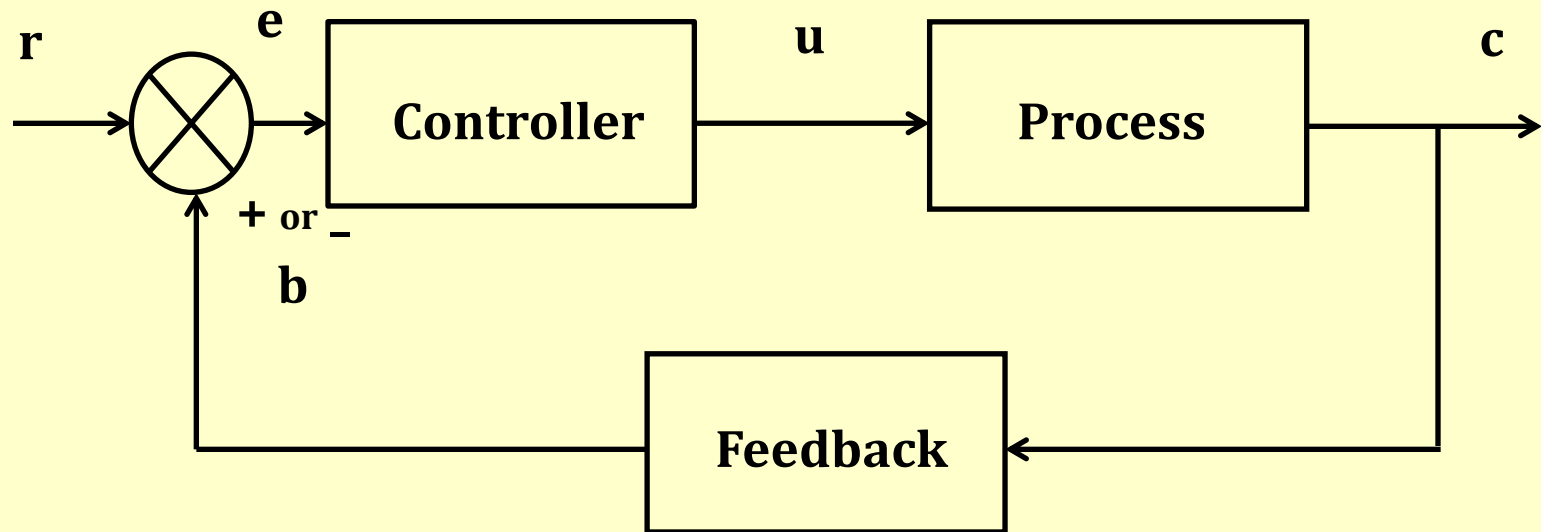
# Open-Loop Control System

**Open-Loop Control Systems utilize a controller or control actuator to obtain the desired response.**



# Closed-Loop Control System

**Closed-Loop Control Systems utilizes feedback to compare the actual output to the desired output response.**



## Multivariable Control System

