**EZEIRUAKU CHUKWUKA**

**14/ENG01/019**

**CHEMICAL ENGINEERING**

**CHE 531- PROCESS DYNAMICS AND CONTROL I**

**Assignment II**

Compare and Contrast feedforward and feedback control systems.

**COMPARISM**

1. They both react automatically to changing environmental dynamics.
2. They both utilize sensors to measure important factors and a set of rules to react to changes in those factors.

**CONTRAST**

| **Sr. no** | **Point of Difference** | **Feedback control system** | **Feed Forward Control system** |
| --- | --- | --- | --- |
| 1 | **Definition** | Systems in which corrective action is taken after disturbances affect the output | Systems in which corrective action is taken before disturbances affect the output |
| 2 | **Necessary requirement** | Not required | Measurable Disturbance or noise |
| 3 | **Corrective action** | Corrective action taken after the disturbance occurs on the output. | Corrective action taken before the actual disturbance occurs on the output. |
| 4 | **Block Diagram** | https://upload.wikimedia.org/wikipedia/en/thumb/c/c7/Control_Systems.png/300px-Control_Systems.png | https://upload.wikimedia.org/wikipedia/en/thumb/c/c7/Control_Systems.png/300px-Control_Systems.png |
| 5 | **Control Variable adjustment** | Variables are adjusted depending on errors. | Variables are adjusted based on prior knowledge and predictions. |
| 6 | **Example** | Use of roll sensor as feedback element in ship stabilization system. | Use of flowmeter as feed forward block in temperature control systems. |