**Unit 2 Topics**

* Regulator problems
* Servo problems
* Bang Bang control
* Proportional Control
* PI control
* Anti-reset windup
* PID control
* Sensor/Transmitter Systems
* Control system
* Actuator system
* Transducer
* Accuracy/Precision/Bias
* Span/Zero/Gain/Linear Range for Sensors
* Fail open/Fail close
* Sizing valves
* Linear/Quick open/Equal percentage valves
* Block diagrams (BD) and BD algebra
* Stability Analysis from BD
* Characteristic Equation
* Positive Coeffcient and Routh Array
* Stablity range of Kc
* Reverse acting vs. direct acting
* IMC correlations for tuning control parameters
* Stability vs. Performance
* Different forms of PID
* Qaulitative effects of changing PID parameters
* Forcing function options for finding controller settings
* Good controller settings ('rule of thumb')
* Frequency response analysis
* Calculating AR and phase angle
* Interpreting a Bode Plot for Stability Analysis