



# Faculty of Engineering

## Department of Biomedical Engineering

05

## Sensor Properties

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**BME 312**

**Biomedical Instrumentation II**

# Range

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- **Range** = Maximum and Minimum values of applied parameter that can be measured.
- **Span:** total range of sensor for minimum to maximum.
- If your instrument can measure from -10V to +10 V your **dynamic range/span** is 20V

# Linearity

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- Extent to which actual measure curved or calibration curve departs from ideal curve.

# Offset

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- output that will exist when it should be zero

# Response Time

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- Time required for a sensor output to change from previous state to final settle value

# Threshold

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- **The minimum change in input that causes a change in output.**

# Errors in measurements

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- When we measure a variable, we seek to determine the true value.

# Accuracy

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- maximum difference that will exist between the actual value and the indicated value of the sensor