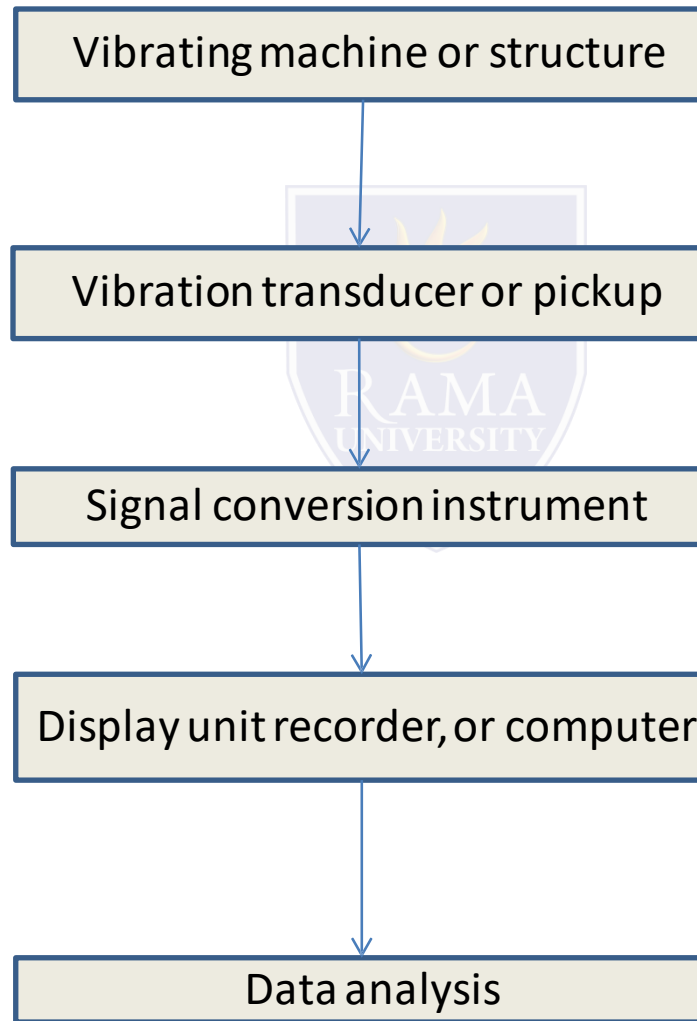




## FACULTY OF ENGINEERING & TECHNOLOGY

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## Basic Step of Vibration Measurement



# PROCESS INSTRUMENTATION

## Necessary Equipment

The measurement of vibration requires the following hardware:

1. An exciter or source of vibration to apply a known input force to the structure or machine.
2. A transducer to convert the physical motion of the structure or machine into an electrical signal.
3. A signal conditioning amplifier to make the transducer characteristics compatible with the input electronics of the digital data acquisition system.
4. An analyzer to perform the tasks of signal processing and modal analysis using suitable software.

## Accelerometer

- Accelerometer used to measure the
  - acceleration of vibrating body.
- It is widely used to vibration measurement and also to record earthquakes.
- From the accelerometer record, the velocity and displacements are obtained by integration.
- Two type of accelerometer are commonly used compression type and shear type.
- Mostly piezoelectric transducer used
  - in accelerometer.

