Read Chapter 1 in textbook

1) **MEMS** → acronym for "Microelectromechanical Systems"
   → need to know this

**Definition**: Any device or system partially or fully manufactured using microfabrication techniques
→ Developed out of the integrated circuit industry

**MEMS**

\[ m : "Micro" = 1 \times 10^{-6} \rightarrow \mu \]

when applied to size: \[ \mu m = 1 \times 10^{-6} m = 1 \times 10^{-3} mm \]

**Loose definition of "small" size**

- **Macro**: 2 mm and larger
- **Meso**: 500 \( \mu m \) to 2 mm
- **Micro**: 0.5 \( \mu m \) to 500 \( \mu m \)
- **Nano**: 1 nm to 0.5 \( \mu m \)

**Microelectro** → miniturized electrical/electronic devices
→ transistors, traces, electrodes, etc.

**Micromechanical** → miniturized mechanical devices
→ cantilevers, membranes, nozzles, etc.

**Microfabrication** → Processes for building micro devices

**Micromachining** → microfabrication, but especially when applied to building 3D structures and devices

Example **MEMS Devices** → accelerometers, ink-jet printer heads, Texas Instruments DLP chip