

→ 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" = 1×10^{-6} → μ

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

Loose Definition of "small" size

Macro: 2mm and larger

Meso: $500\mu\text{m}$ to 2mm

Micro: $0.5\mu\text{m}$ to $500\mu\text{m}$

Nano: 1nm to $0.5\mu\text{m}$

Microelectro → miniaturized electrical/electronic devices

→ transistors, traces, electrodes, etc.

Micromechanical → miniaturized 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