

# Discrete vs. Integrated circuit design

## Discrete

- Board-level system
- Devices "Take what you get"
- Matching difficult
- + Precise values possible
- + Large R, C possible
- + Many types of components
- + Possible to breadboard

## Integrated

- + Chip-level system
- + Control over device geometry
- + Matching inherent
- Absolute values vary widely
- Largest C  $\approx 100\text{pF}$ ; large R bad
- Limited to types in process
- Can't breadboard; simulation