

# (Micro)architecture Design Principles

---

## ■ Critical path design

- Find and decrease the maximum combinational logic delay
- Break a path into multiple cycles if it takes too long

## ■ Bread and butter (common case) design

- Spend time and resources on where it matters most
  - i.e., improve what the machine is really designed to do
- Common case vs. uncommon case

## ■ Balanced design

- Balance instruction/data flow through hardware components
- Design to eliminate bottlenecks: balance the hardware for the work