Non Goals : Starvation

Starvation is when a thread is prevented from making progress because some other thread has the resource it requires (could be CPU or a lock)

➡ Starvation is usually a side effect of the scheduling algorithm

- e.g a high priority thread always prevents a low priority thread from running

➡ Starvation can be a side effect of synchronization

- e.g constant supply of readers always blocks out writers

Scheduling Criteria

- **Throughput** – # of threads that complete per unit time
  *# jobs/time (*Higher is better)

- **Turnaround time** – time for each thread to complete
  *Tfinish – Tstart (*Lower is better)

- **Response time** – time from request to first response ()
  i.e. time between waiting to ready transition and ready to running transition
  Tresponse – Trequest (Lower is better)

➡ Above criteria are affected by secondary criteria

  - CPU utilization – **%CPU** fraction of time CPU doing productive work
  - Waiting time – **Avg(Twait)** time each thread waits in the ready queue