Lecture 17, Feb 15, 2023

Ergonomics and Cognitive Ergonomics

- Ergonomics is the study of the interface between an individual's physiology and the characteristics of the physical environment
  - How do we reduce the physical demands of jobs so that people are better able to perform them?
- *Cognitive ergonomics* is designing for mental capacity, instead of physical capacity
  - When there are distractions around you, there is an additional demand for mental capacity
  - Cognitive ergonomics aims to reduce errors and accidents through processes such as reducing manual processes or reducing the amount of memorization
  - Reducing cognitive demands can keep us more focused and motivated
- Alternative working schedules can be used to reduce cognitive demand, allowing you to work and live your personal life at the same time
  - Flex-time: flexibility in the time you start and end work
  - Split shifts: working at different times throughout the day
  - Compressed workweek: working more during some days to take more days off
    * Disadvantages: you might burn out, your colleagues have less access to you, etc
    * Can also rearrange times during the year, e.g. for educators getting summers off
  - Job and work sharing
  - Telecommuting

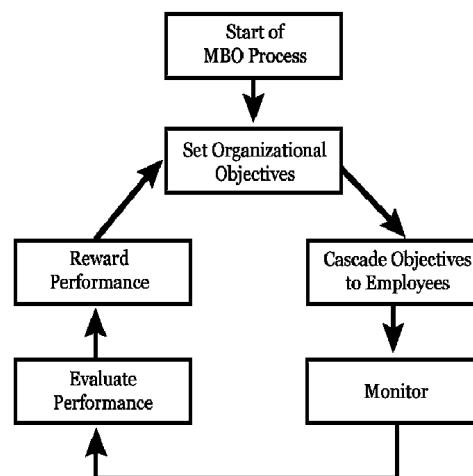## Management By Objectives (MBO)

Figure 1: The MBO process

- Companies have an objective (e.g. developing an app to increase student productivity), which is cascaded down to employees (e.g. designing a UI for students to enter their info)
- Employees' performance are monitored, and at the end of the year there is a performance evaluation
- The hard part is translating that company objective to a specific objective for an employee (e.g. what font for the UI?)
- Manager-employee interaction cycle:
  - Goal setting: manager meets with individual employees to develop employee objectives (which can include performance and personal development objectives)
  - Check-ins: periodic meetings to monitor employee progress
  - Appraisal meeting: held to evaluate how well the agreed upon objectives have been achieved

- When does MBO fail?
    - Lack of commitment from top management
    - Too much focus on quantitative rather than qualitative factors
    - Goals are too short-term
    - Performance reviews are used as punishment
- The motivational systems should fit the goals of the organization
- Consider employee needs, nature of the job, organizational characteristics and motivational outcome
- Motivational systems that make use of a variety of motivators are more effective