

# ARC 226 Construction Scheduling

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## CHAPTER 1 OVERVIEW OF PROJECT MANAGEMENT BASICS

# PM Objectives

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- **Project Management-**
  - Managing the resources of the project
- **Primary objectives**
  - Quality project
  - Completed on time
  - Within budget
  - Safe work environment

# Quality

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- Must meet the owner's expectations
- Quality can not be sacrificed to meet time constraints
  - Often more costly in the long run
- If quality is the main concern, the project will take longer to complete
- Balance quality with time and budget constraints

# Time

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- If time is the main concern, quality suffers
  - May also be a safety consideration
- Effects of overtime
  - Increased cost
  - Decreased productivity

# Budgets and Costs

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- Work must be done at the lowest possible cost
  - Decreases quality
    - ✦ Inferior products used
    - ✦ Less attention to detail
    - ✦ Less expensive workers
      - Apprentices vs. journey-level
  - May increase maintenance costs
  - Decreases building lifespan
  - Decreases safety considerations

# Safety

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- **Safety become the chief concern**
  - Productivity lessens
  - Job durations increase
- **Some projects will have safety as the main consideration**
- **Regulations other than OSHA standards**
  - Nuclear power plants
  - Food production facilities

# Balancing the Major Objectives

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- **Balancing time, cost, quality, safety**
  - Some projects require one objective to take precedence over the others
    - ✦ The effectiveness of the others must not be decreased
- **Try to recognize early in the project which objective will be emphasized**
  - Different parties involved have different objectives
    - ✦ Architect's one-of-a-kind project vs owner's cost constraints vs safety considerations
- **The best schedule balances the main objectives**
  - It is not necessarily the shortest schedule

# Achieving the Primary Objectives

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- **Planning**
  - What is the plan to achieve the objectives?
- **Organize**
  - Organize all aspects of the project to achieve efficiency
- **Direct**
  - Give direction to the parties involved
- **Control**
  - Control time, cost, quality while providing a safe work environment



# Problem Projects

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- If a project is in trouble, why is it in trouble?
  - Basics
    - ✦ Time, cost, quality, and safety
      - Managed by planning, organizing, directing, controlling
- The schedule is a key piece of the project
  - Interfaces with all the project management basics
  - Gives direction on how the team is going to accomplish the primary objectives

# Assuming Responsibility

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- Know when to accept blame
- Do not use the schedule to assign blame
  - Use the schedule as a management to motivate and communicate
- Be proactive
  - Every problem on the job-site is the problem of the PM
  - What can be done to avoid problems in the future?
  - Blaming others will not solve the problem
- Avoid problems by planning ahead
  - A well-planned schedule is an integral part