

Project Planning & Management for Construction Supervisors

Time: 32 hours

Maximum Class Size: 10

Prerequisites: None

Course Description: This 32-hour LIUNA Training and Education course provides a basic overview of project planning. Students are introduced to job preplanning, project analysis and site planning. Other topics include purchase orders, cost codes, and cost reports. The process of project scheduling is also introduced. Working in small groups, students will have the opportunity to discuss and apply these skills to a variety of real-world scenarios. Students are then required to complete purchase orders and an economic decision analysis.

Goals/Objectives/Student Learning Outcomes:

- List the six variables that should be considered in a project analysis.
- Given a written description of a construction project and working in small groups, perform a project analysis and record all potential problems; suggest at least one solution to each problem.
- Explain why a project supervisor should perform a value engineering study.
- List the four steps of a value engineering study and the 5 criteria to follow when doing a study.
- List seven items to consider when pre-planning a project; provide at least one example of a potential problem that pre-planning can anticipate and eliminate.
- Given a scenario of a small construction project and working in small groups, create a site work plan showing site access, storage areas, utilities, office and tool trailers, haul roads and security provisions.
- List two reasons that planning for safety can benefit the project.
- Explain at least two advantages of scheduling on a construction project.
- List the two most common schedule formats used on construction projects; list at least three differences between methods.
- List and describe the six-step process of project scheduling.
- Given a list of construction work activities and working in small groups, list the activities in the proper sequence; create a bar chart schedule of the activities.
- Define the following CPM terms: Activity, Activity Flow, Duration, Early finish, Early start, Float, Late Finish, Late Start, Milestone, Network logic diagrams, Nodes
- Explain the purpose of performing the following when creating a CPM schedule: Forward pass, Backward pass, Float calculations.
- Given a project scenario and working in small groups. Create a CPM network diagram by performing the forward and backward passes and calculating float times.
- Explain the advantage of using start-to-start calculations on the project schedule.
- List and explain the purpose of the four types of construction project schedules; production, look-ahead, equipment and material.

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- Explain the project supervisor's responsibilities for procuring materials for a construction project.
- List the three types of materials used on a construction project.
- List the seven steps of the procurement process.
- Given a material list, cost codes and a blank purchase order, complete the purchase order for ordering the material with 80% accuracy.
- Given the scenario of a cost decision to be made, perform an economic decision analysis to find the most cost effective solution.
- Explain the supervisor's role in reporting project costs and keeping track of the project budget.
- Explain the term "cost management".
- Given a list of project expenses, complete a Project Cost report.
- List at least 5 cost management techniques that can be employed to keep a project within its budget.
- Explain the term "time management".
- List at least four Time Management Techniques that can be employed to keep a project on schedule.

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

Textbooks/Readings/Materials

- LIUNA *Project Planning & Management for Construction Supervisors* IG/PG
- Project Planning & Management for Construction Supervisors Handout Packet
- LIUNA *Project Planning & Management for Construction Supervisors* PowerPoint

Personal Protective Equipment

- 10 pairs of gloves
- 10 pairs of safety glasses
- 20 pairs of earplugs
- 12 hard hats

Course Requirements

To receive credit for the course, participants must:

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- Be present for the full 32 hours
- Participate in all classroom exercises
- Pass a written exam

Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment

Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

Safety

Failure to maintain and use PPE may result in dismissal from the course.