

CIE485 Construction Management
Homework #1
Due: Monday, March 12, 2012

Problem 1

- a. Construct an activity on arrow network based on the activity description below. Show all your work. Label activities in the network by their activity letters and properly number the nodes. Remove any redundant dependencies and label dummy activities D1, D2, etc.
- b. Construct a precedence network based on the same activity descriptions below. Show all your work. Label activities in the network by their activity letters and node numbers. Remove all redundant dependencies and arrange activities in proper sequence steps.

Activity Description:

- Activity H is followed by Activities V, X, L and Z.
- Activity C precedes Activity P and follows the completion of Activities Q, J and E.
- The predecessors to Activity N are Activities E, K and F.
- Activity O follows Activities D and N, and precedes Activity P.
- Activity J is preceded by Activities T, D and L.
- Activity I follows Activity U and precedes Activity Q.
- Activity U can start when Activities V and X are completed. Activity D follows Activity U.
- Activity E depends on Activity L and H and precedes Activities T, N and J.
- Activity M is preceded by Activities X, L and Z and followed by Activities K and F.

Problem 2

- a. Construct an activity on arrow network based on the activity description below. Show all your work. Label activities in the network by their activity letters and properly number the nodes. Remove any redundant dependencies and label dummy activities D1, D2, etc.
- b. Construct a precedence network based on the same activity descriptions below. Show all your work. Label activities in the network by their activity letters and node numbers. Remove all redundant dependencies and arrange activities in proper sequence steps.

Activity Description:

- Activities H, M and B start the project.
- The successors to Activity B are Activities K, A, W and J. Activity K also depends on Activity M.
- Activities U and F follow Activities W and J, and precede Activities E and Q. Activity E is also preceded by Activities C and R.
- The predecessors to Activity G are Activities L, C and R.
- Activity C can start after Activities H, K and A are completed.
- Activity R cannot begin until Activity W is finished.
- Activity X follows Activity H and precedes Activity L.
- Activity Y depends on Activities C and R and precedes Activity L.