e.g. Activity A data:

Normal	Crash
Time | Cost	Time | Cost
12 days at £480	8 days at £640

$$\text{Cost slope} = \frac{640 - 480}{12 - 8}$$

$$= \underline{\underline{\text{£40/day}}}$$

e) Least cost scheduling or 'crashing'. The process which finds the least cost method of reducing the overall project duration, time period by time period. The following example shows the process step by step.

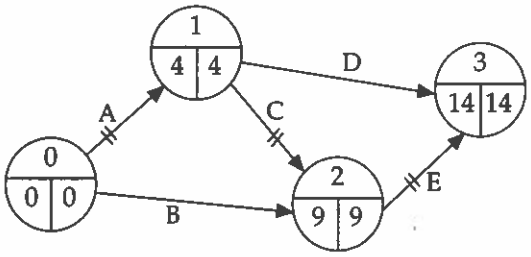
Least cost scheduling rules

3. The basic rule of least cost scheduling is simply stated. Reduce the time of the activity on the critical path with the lowest cost slope and progressively repeat this process until the desired reduction in time is achieved. Complications occur when time reductions cause several paths to become critical simultaneously thus necessitating several activities to be reduced at the same time. These complications are explained below as they occur.

Least cost scheduling example

A project has five activities and it is required to prepare the least cost schedules for all possible durations from 'normal time' – 'normal cost' to 'crash time' – 'crash cost'.

Project data activity	Preceding activity	Time (days) Normal	Crash	Costs (£) Normal	Crash	Cost (£) Slope
A	–	4	3	360	420	60
B	–	8	5	300	510	70
C	A	5	3	170	270	50
D	A	9	7	220	300	40
E	B, C	5	3	200	360	80



Project network. Figure 24/ 1

Project durations and costs

a) Normal Duration <u>14 days</u>

Critical path A, C, E

Project cost (i.e. cost of ***all*** activities at normal time) = <u>£1,250</u>
(i,e, £360 + 300 +170+ 220+ 200)