Week 12
Term 4

Learning Brief

MA4: Network Analysis

Goals

By the end of this topic, you should be able to:

- construct a network to represent the durations and interdependencies of activities that must be completed during the project; for example, preparing a meal
- use forward and backward scanning to determine the earliest starting time (EST) and latest starting times (LST) for each activity in the project

Theoretical Components

This week we are looking at networks again but not looking at the critical paths but looking at the other paths for their float times and also the capacity of the network.

Again – make sure you get up to date as there are only a few weeks left ☺

The float time of a task is the time that the task can be delayed without it having an effect on the completion time for the network. Ie not affecting the critical path.

When we look at a network's capacity we have to look at the flow to and from each node. The capacity of the node may be greater in the outflow, but if there is only a limited inflow then this inflow is the maximum outflow.

Also if there is more flow coming into a node than the capacity of the outflow, the outflow is the maximum capacity of the node.
We apply this to find the flow of a whole network.

Don't forget to use the Mathspace Lessons as well as the questions.

Practical Components

Do the set **Mathspace tasks** given (do more if you need). Organise your work/notes neatly:

Tasks:

1. Float times
2. Network flow
3. Ex 15D Google Classroom Text

Investigation

Word answers:

Explain the purpose of a dummy activity

Outline how the earliest start and finishing times for an activity in a network are calculated

What is the relationship between EST, LST and the critical path?