

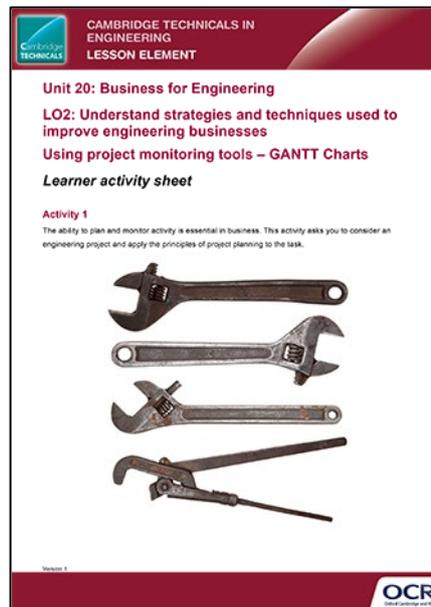
## Unit 20: Business for Engineering

### LO2: Understand strategies and techniques used to improve engineering businesses

#### Using project monitoring tools – GANTT Charts

### *Instructions and answers for teachers*

*These instructions should accompany the OCR resource ‘Using project monitoring tools – GANTT Charts’ activity which supports Cambridge Technicals in Engineering Level 3.*



#### **The Activity:**

Teachers could introduce learners to the importance of monitoring projects and activities and the basic principles of GANTT charts.



*This activity offers an opportunity for English skills development.*



*This activity offers an opportunity for maths skills development.*

#### **Suggested timings:**

2 hours

## Activity 1

Teachers could introduce learners to the importance of monitoring projects and activities and the basic principles of GANTT charts. The Mind Tools resources at:

[http://www.mindtools.com/pages/article/newPPM\\_03.htm](http://www.mindtools.com/pages/article/newPPM_03.htm) can help prepare this discussion.

This task could be used on its own or as an introduction for learners to use GANTT charts in a project of their own.

This example uses a free, online GANTT chart tool called Tom's Planner, available at:

<http://www.tomsplanner.com/>

Teachers may prefer to create a GANTT chart using other packages.

Learners are given a specific project scenario which they then create a GANTT chart to represent the project using the online tool or a programme of the tutor's choice.

This task could be completed as part of self-directed study time.

A completed GANTT Chart is included below; results will vary depending on assumptions made.

The illustration suggests the minimum time required for the development of the project is 48 working days.

The purpose of the exercise is to promote discussion on approaches and assumptions rather than generating highly accurate results.

### Project Scenario

OCR Tooling is a manufacturer of a range of tools and equipment working Monday to Friday. Research has identified that there is a market for a specialist screw wrench. To manufacture the screw wrench, OCR Tooling will need to source and install new equipment in the factory and will require three extra staff to operate the equipment.

Your task is to plan out the different stages of the project and use a GANTT chart to produce a project plan. Approval to proceed will be required at various points.

You have been provided with the list of 18 activities and how long each activity should take. You can assume that the timings are accurate for the purpose of the task.

Task	Length
Develop proposal	1 week
Present proposal for approval	1 day
Selection of staff to operate	1 week
Training of staff	2 weeks
Trial production run	2 weeks
Develop marketing materials	1 week
Sign off marketing materials	1 day
Marketing campaign	3 weeks
Analysis of trial production	1 day
<b>Project Approval</b>	<b>Milestone</b>
Selection of equipment	1 week
Installation and commissioning of equipment	2 weeks
<b>Approval to proceed to limited production</b>	<b>Milestone</b>
Limited production for sales	1 week
Collection of initial customer feedback	2 weeks
Evaluation of initial customer feedback	1 day
Scale up production	1 week
<b>Approval of scale up based on initial customer feedback</b>	<b>Milestone</b>

Order the activities and transfer them to the following table and complete the last column.

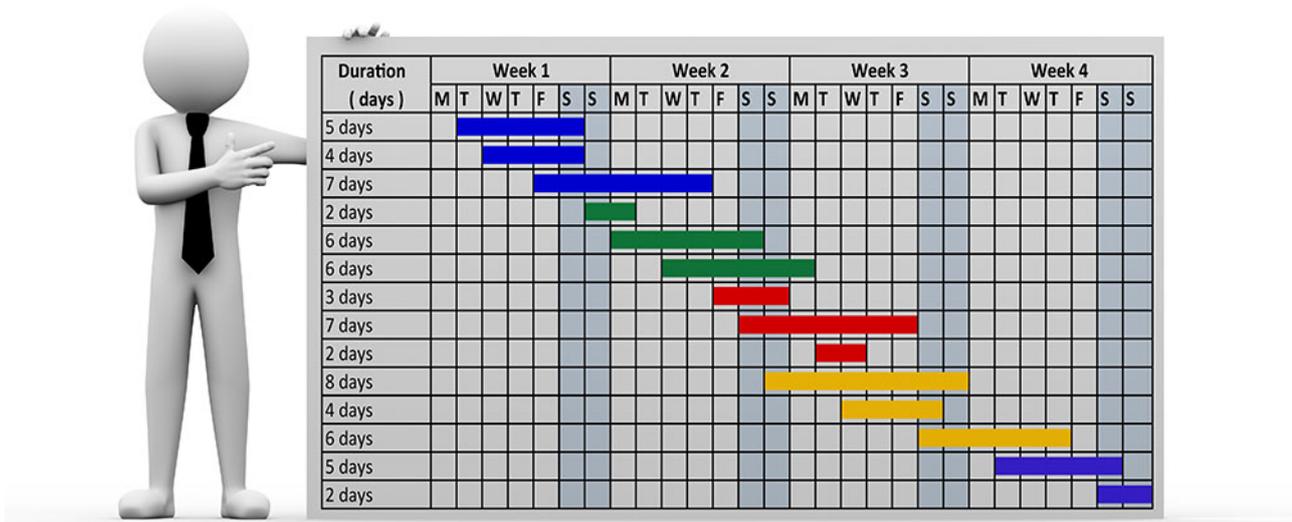
Once the table is complete, use the information to create the GANTT chart.

Assuming the timings are correct, what is your estimate of the shortest length of time it will take before OCR Tooling is in full production of the screw wrench?

The table below suggests the order of the tasks.

Task ID	Task	Length	Must follow Task ID
A	Develop proposal	1 week	
B	Present proposal for approval	1 day	A
C	Project Approval	Milestone	B
D	Selection of equipment	1 week	C
E	Installation and commissioning of equipment	2 weeks	D
F	Selection of staff to operate	1 week	C
G	Training of staff	2 weeks	F
H	Trial production run	2 weeks	G
I	Analysis of trial production.	1 day	H
J	Approval to proceed to limited production	Milestone	I
K	Limited production for sales.	1 week	J
L	Collection of initial customer feedback	2 weeks	J
M	Evaluation of initial customer feedback	1 day	L
N	Approval of scale up based on initial customer feedback	Milestone	M
O	Scale up production	1 week	N
P	Develop marketing materials	4 weeks	C
Q	Sign off marketing materials.	1 day	P
R	Marketing campaign	3 weeks	J

## GANTT Chart Activity – Completed example for tutor



An example of a completed GANTT chart is included in the learner activity sheet.

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