AL Business Studies 9707
4AL: Operations and project management

Recommended Prior Knowledge
This unit builds on the AS units. It is important that 4AS is completed before this unit. There is no additional extension material for 4AL.1 and 4AL.3 but it is important that students' analysis and evaluation skills continue to be developed and that these topics are seen in a strategic context. This unit links with 6AL.

Context
This unit should build on the topics at AS in 4AS. The emphasis is on planning to improve efficiency. Where possible these ideas should be in a 'real life' context although that is more difficult for this unit. Although many of the ideas originated via production processes they are as applicable to other sectors of business such as retailing and services.

Outline
Enterprise Resource Planning is introduced as a new topic to this syllabus. Ideas for improving capacity utilisation are developed. Quality issues are explored from both the producer's and customer's perspectives. Critical Path Analysis is studied as a means of improving project management.

References to the endorsed textbook, A level Business Studies, 2nd edition by Peter Stimpson and Al Farquharson are in RED. Although activities have been selected from this book, these are only suggestions – there are many other useful activities that can be undertaken including others in the endorsed textbook and associated CD-ROMs and in other recommended textbooks.

AO	Learning outcomes	Suggested Teaching activities	Learning resources
4AL.1	**The nature of operations**	*No topics beyond AS level. However, at A level teaching should develop the AS topics in terms of greater depth of analysis and evaluation.*	
4AL.2	**Operation planning** • Enterprise resource planning (ERP)	This is a new topic so may be challenging to teach particularly as it is a technique applicable to large organisations. The ideal would be to get a manager from a large organisation to visit the school and to design some suitable activities. Useful activities include: German efficiency and ERP (p 416)	Chapter 22 http://www.tech-faq.com/erp.shtml provides a good introduction. http://en.wikipedia.org/wiki/Enterprise_resource_planning provides more detail.
4AL.3	Inventory management	*No topics beyond AS level. However, at A level teaching should develop the AS topics in terms of greater depth of analysis and evaluation.*	
4AL.4	**Capacity utilisation** • Measurement and significance of capacity utilisation • Increasing capacity utilisation	This topic should be taught from the perspective of business decisions, i.e. how can capacity utilisation be improved in a given situation. The topic would best be handled through case material which could be provided by local businesses. Useful activities include: • Hotels' excess capacity (p 432) • Dell to increase capacity at Malaysian plant (p 433)	Chapter 23 http://tutor2u.net/business/production/capacity-utilisation.htm provides useful notes etc. http://wikitextbook.co.uk/index.php/Capacity_utilisation_(A_level_BS) , provides useful additional material Examination question: • May 2008 Paper 3 Q 2 • May 2008 Paper 3 Q 3
	• Outsourcing	Useful activities include: • World's airlines increase outsourcing (p 438)	http://www.businesslink.gov.uk/bdotg/action/layer?topicId=1073921035 provides useful material

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4AL.5	**Lean production and quality management** • Lean production • Kaizen • Just in time	Introductory activity: The triumph of lean production (p 440) Lean production needs to be taught as a whole philosophy applying to a business rather than as an alternative production system. It should not be limited to manufacturing production (as its name implies). JIT will have been studied in the context of inventory management in 4AS. Useful activities include: • Haisho Electronics: is lean production the answer? (p 444) • Kaizen thinking fires productivity (p 446)	Chapter 24 There are some good resources for lean production at: http://1000ventures.com/business_guide/lean_production_main.html
	• Quality control and assurance • Total Quality Management • Benchmarking	Introductory activity: Are expensive products always the best quality? (p448) Quality is often taught from the producer's perspective (product oriented) whereas it is best seen from the perspective of the consumer (market oriented). Quality issues may have been touched on when dealing with Product in the marketing mix. Teaching can be 'self discovery' with students visiting appropriate quality web sites as well as exploring quality issues for well known brands. Visits to businesses could be appropriate, as well as visiting speakers although it is difficult to get the concepts of complex production processes into the classroom.| Useful activities include: • Quality assurance at the hairdressers (p 454) • Trinidad Tractor Factory – quality becomes an issue (p 455) Revision + Lack of competitiveness threatens AVCO's survival. (p461)	There are some good links for benchmarking at http://www.benchnet.com http://www.thecqi.org is good for quality assurance. Examination question: • May 2006 paper 3 Q 2 • Nov 2006 Paper 2 Q 2(c)

AO	Learning outcomes	Suggested Teaching activities	Learning resources
4AL.6	**Project management** • The need for projects and project management • Network diagrams • CPA	It is important that students understand that projects are a response to a need for change. And that the successful completion of projects depends on effective project management. Students should be able to distinguish what is meant by 'operations' and by 'projects', realise that some business activities are better managed as 'projects' than as 'operations', and recognise that projects require a different set of management skills compared to operations (links in with People in organisations). The 'need for change' can arise in any part of the business. So, for example, the campaign for the launch of a new product (links in with Marketing) would be just as valid as a 'project' as say the construction of a building. The failure of some real projects in your country can be investigated. The class can explore the possible reasons for failure. Then discuss, more generally, what is actually meant by project failure (or success) – e.g. is it the project being delivered 'on time, within budget, to required quality' or is it about customer satisfaction at the end of the project? What rules could we define to help ensure success? The above activities can help students realise that project management is much more than a number of techniques (of which CPA is only one). CPA is a very good way of improving the numerical analytical skills of students who find maths difficult. Once students have grasped the basic logic of a network diagram the arithmetic is fairly straightforward and produces immediately useful results. It is useful to get students to develop the skill of drawing networks as it will produce benefits in the understanding of the analysis of networks. This is probably best taught as a teacher led topic, with room for discussion in terms of the usefulness of the technique and its shortcomings. As well as the basic analysis technique, students should know how to calculate and use floats. Useful activity: Jamaica Photos Ltd.(p 471)	Chapter 25 http://www.mindtools.com/critpath.html provides some good resources. www.jiscinfonet.ac.uk/infokits/project-management includes a look at what project management is and why many projects fail Examination questions: • Nov 2008 Paper 3 Q 3