Unit 7: Management Accounting

Unit code: J/502/5419

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

Aim and purpose

The aim of this unit is to enable learners to understand how important management accounting is to all businesses. It looks at costing and budgeting, and how to use current or historical financial data to plan for the effective finances and costs of the business for the future.

Unit introduction

Whether an organisation is successful and long established or a business start-up, one of the most important aspects of its management is effective financial planning and control. This is known as management accounting and it builds on historical accounting information provided by financial accounts. A sound understanding of costs and cost accounting is an essential part of managing finances.

Learners need to understand the nature of costs and the impact on those costs of expanding the organisation or increasing business activity. Appropriate pricing of an organisation's products or services will play a large part in its future profitability. This unit aims to help learners to understand how management accounting begins with planning the activity levels and establishing the costs, incomes and profits for future periods. Break-even analysis allows managers to assess optimum activity levels whilst historical data can be used to look for trends that can forecast more accurately the figures that are used in budgets.

Simply preparing financial forecasts is not sufficient to keep control of a business organisation will then want to compare actual activity levels, costs and incomes with those that were planned. The management accountant will calculate and consider the differences between budgeted and actual figures. This will form the basis of management decisions which are used to steer the business back towards its planned targets.

On completion of this unit, learners will have a good appreciation of the skills and understanding necessary to manage the finances of an organisation. They will be able to assess the problems highlighted by variance analysis and make realistic decisions on the likely courses of action.

Learning outcomes

On completion of this unit a learner should:

1 Understand how production costs are determined and used to calculate prices

2 Be able to use break-even analysis

3 Be able to use appropriate statistical information to review and predict business performance

4 Be able to use budgetary techniques.

Unit content

1 Understand how production costs are determined and used to calculate prices

Costs: direct costs (raw materials, unfinished goods, direct labour costs, direct expenses); variable costs; depreciation; semi-variable costs; stepped costs; indirect costs; fixed costs; cost centres; profit centres; non-production (service) department overheads; overhead allocation; apportionment; overhead absorption rate; absorption costing; activity-based costing; marginal costing; standard costing

Prices: cost plus; discounting; impact of pricing policies on production and costs; income

2 Be able to use break-even analysis

Break-even analysis: contribution; break-even formula; break-even graph; break-even point; area of profit; area of loss; margin of safety; budgeted activity and sales levels; numerical calculation; changing overheads; direct costs; selling prices and budgeted activity levels; target profit levels of activity; use of computerised spreadsheet (tabulation, charts, goal-seeking); limitations and assumptions (sales levels being identical to production levels, consistency of selling price, contribution and overhead behaviour); external factors (inflation, interest rates)

3 Be able to use appropriate statistical information to review and predict business performance

Accounting data: previous period (sales, production costs, profits); information from published financial reports

Statistical information: changes over time; moving averages; seasonal variations; price indices eg Retail Price Index (RPI); trends to assess and predict business performance

Performance: ratio analysis; liquidity ratios (current ratio, liquid capital ratio); profitability ratios (gross profit mark-up, gross profit margin, net profit margin, overheads to sales margin, return on capital employed); efficiency (stock turnover days, debtors' collection days, creditors' payment days, fixed assets turnover ratio, net current asset turnover ratio); capital gearing; previous periods

4 Be able to use budgetary techniques

Budgets: master; sales; production; purchases; debtors; creditors; cash; departmental (consolidation); standard costing; analysis of variances eg change of activity levels, costs and prices; use of accounting and statistical information

Budgetary techniques: preparing and revising budgets (changes to costs and selling prices); use of budgets for short-term target setting; monitoring (comparison of standard or budgeted costs with actual costs, calculation and explanation of variances); control measures (decision making, taking action); reliability (importance of accuracy, results of error, inaccurate assumptions); relationship between costs and incomes at different activity levels; strengths and weaknesses of budgetary techniques

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 explain how an organisation can cost a product and determine its price at any activity level [IE]		
P2 carry out a break-even analysis for a selected organisation	**M1** assess the implications of different activity levels using the results of a break-even analysis for a selected organisation	**D1** evaluate the reliability of break-even analysis in estimating budgeted activity levels for a selected organisation
P3 use accounting data and statistical information to measure business performance [CT]	**M2** analyse the importance of accounting data and statistical information to assess and predict business performance	
P4 use budgetary techniques to prepare budgets for a selected organisation	**M3** analyse the impact on a budget of changes in costs and selling prices for a selected organisation. [RL]	**D2** evaluate the implications of budget variances for a selected organisation.
P5 describe how budgets can be used to set targets, to monitor and control an organisation. [RL]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Management accounting builds on information gained from financial accounting and encompasses the skills and techniques of costing and cost accounting. Successful organisations will build on the performance of previous years by setting realistic and achievable targets for the following year. For new businesses without historical data, the task is much more difficult. However, the same objectives and principles will be applied to put together budgets that will be used to guide owners as they make both short-term and long-term decisions. This unit is about short-term planning or target setting.

The unit is designed to include practical tasks involving the calculation of costs, prices, income, profits and variances. Learners will be able to draw on their own knowledge of products and services they have bought and many will have experience of employment and rates of pay. All learners will have experience of handling money and many will have budgeted their own funds, either formally or informally.

Learning outcome 1 is about production costs and these include fixed and variable costs. Initially, learners will learn how to recognise common costs and their nature. In costing a product, indirect costs of non-production cost centres must be included and learners will learn how these overheads might be absorbed into unit costs, using traditional and modern absorption costing techniques. Absorption costing techniques will be compared with marginal costing. Standard costs are an important feature of budgeting and learners will work in groups and carry out the necessary research to calculate the actual costs of materials for a product of their own choice. This research will include use of the internet. Learners will also work in groups to establish a reasonable price for the product based on direct costs, estimated overheads and current market prices.

Learners will need to understand how break-even analysis is used to find the activity level at which all overhead costs are covered. Organisations will consider the margin of safety at budgeted activity levels as well as calculating the activity level that will result in a given profit. These techniques are an essential part of the budgeting process and allow organisations to predict activity levels that are achievable and sufficiently profitable.

For learning outcome 2, learners will carry out practical calculations based on case studies and simulations and will produce break-even charts. Learners will use computerised spreadsheets to tabulate the data. Simple goal seeking functions will enable learners to observe the changes in a variety of scenarios, such as an increase in overheads, direct costs, selling prices, budgeted activity and sales levels. Break-even analysis does have its limitations and assumes that all output is sold, selling prices remain constant, overheads do not vary at any point and contribution per unit is the same for all units of output. These factors will limit the value of this technique and learners will need to discuss the limitations and appreciate the dangers of taking an over-simplistic view.

Forecasting sales and costs with accuracy can be remarkably difficult in practice, even with several years' historical data as a guide. Sales volume can be influenced by many factors, including price, quality, market forces and interest rates. Since budgeted activity levels should be based on forecast sales, learners should appreciate the importance of those forecasts being accurate. Overestimating sales may result in high levels of unsold stock. Underestimating sales may result in the loss of customers. Organisations can turn to a range of statistical information and historical accounting data that should enable them to produce forecasts that reflect historical patterns and trends more closely.

More importantly, current business performance can be analysed and better understood by considering historical accounting data and statistical data. Comparative results are always more meaningful, and this is where ratio analysis is so important. Interpretation of the final accounts from previous years enables an organisation to calculate liquidity, profitability, efficiency and gearing ratios. Compared over time, these ratios give an accurate picture of past performance which can be compared with current performance. Eventually, they will provide an accurate basis to predict future performance.

For learning outcome 3, learners will be presented with statistical information that allows them to calculate relative changes over time. They will be able to observe trends and seasonal variations through calculating moving averages. Price indices will be used to remove the effects of inflation from previous periods' data, giving a more accurate picture of actual current performance. Learners will learn how to calculate moving averages and use past and current trends to predict future trends. The impact of these trends on future sales and costs will be calculated to provide informed forecasts. Learners will work on case studies in small groups and will use the internet to check on current relevant indices, while making budget adjustments. Case studies from websites such as Bized will give learners more relevant accounting information about individual companies. Learners will read, and combine, information about a company from two different sources, including the internet and published financial reports. They will produce a report of the key accounting information.

Learning outcome 4 covers the initial preparation of budgets and their subsequent comparison with actual figures. Organisations begin with a sales budget and all other budgets will follow from this, including budgets for production, purchases, debtors, creditors and cash. Departmental budgets may be consolidated to produce one company budget. Ultimately, these budgets give the information needed for the master budget and it is vital that learners understand how they are so closely linked. Budget preparation will be demonstrated and learners will then continue the calculations using case studies and simulations. The use of computerised spreadsheets will allow learners to link budgets directly and then observe the effects on the budgets of changes to sales volume, prices or costs. Learners will discuss, in small groups, any assumptions made for each budget and consider any strengths and weaknesses. Learners will also calculate and comment on variances between budgeted and actual figures. Group discussion will enable learners to consider the implications of adverse and favourable variances before suggesting decisions that might be made to address the differences. For an organisation, budgetary control is a key factor in many financial decisions. Learners must be encouraged to examine budgets and variances critically.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Induction and outline scheme of work/programme of assignments
Formal theory input on how production costs are determined and used to calculate prices
Practical class exercises for application of theory – work on scenarios
Research and group work
Assignment 1: Production Costs
Formal theory input on how to use break-even analysis
Practical class exercises for application of theory – work on scenarios
Visits and speakers from business
Assignment 2: Breakeven
Formal theory input on using appropriate statistical information to review and predict business performance
Practical class exercises for application of theory – work on scenarios
Research and group work
Assignment 3: Measuring Business Performance
Formal theory input on being able to use budgetary techniques
Practical class exercises for application of theory/work on scenarios
Research and group work
Assignment 4: Budgets, Targets and Monitoring
Research
Supervised assignment work
Non-supervised study time and completion of assignments

Assessment

The practical activities should generate assessment evidence. Carefully planned assignments will include a number of calculations and some analytical or evaluative comments. Assessment of the learning outcomes might involve three or four assignments, but could be combined into two assignments.

For P1, learners must explain clearly the main costs elements and the nature of those costs including variable, fixed and semi-fixed (semi-variable). They should give examples of costs relevant to the product in question. They should mention the absorption of overheads as well as marginal costs, although a distinction between traditional and modern absorption costing methods (ABC) is not required. They should describe at least two methods of setting the price, including cost.

For P2, learners should be given the relevant information in a case study and they will explain what is meant by break-even analysis. They will carry out break-even analysis, calculating the accurate break-even point from the information on direct costs, selling price and overheads, using the correct formula. They will also calculate margin of safety and target profit levels of activity. They will prepare a break-even chart to show the same results in diagrammatic form, labelling break-even point, budgeted activity level, margin of safety, area of profit and area of loss. P2, M1 and D1 are linked. P1 could be linked with P2, M1 and D1 using a larger assignment.

For P3, learners will need to describe how an organisation's previous years' data on sales income and costs can be used initially to monitor current business performance and assess its relative success based on current data. They will also need to explain how historical data can be used to detect trends, through the use of moving averages and appropriate indices. They should explain how this statistical information is used in forecasting future trends and business performance. P3 links with P4 and M2.

For P4, learners will be given a case study with some historical accounting information as well as an appropriate price index. Learners will calculate any relevant trend and then apply that trend when calculating the budgeted figures for a future accounting period. The budget might be for sales, production or cash. Learners should prepare a budget in an appropriate tabular format and show evidence of having calculated the moving average accurately and applied a trend to the forecast figures. P4 links with criteria P3 and M2.

For P5, learners will describe clearly the target-setting nature of preparing budgets and the subsequent monitoring process involving comparing budgeted figures with actual figures. Learners will emphasise the importance of calculating and analysing the variances, by trying to understand their likely causes. They will need to describe how management action or decision making will follow in order to ensure budgetary control. P5 links with D2.

For M1, learners will work with the break-even figures calculated in the case study for P2 and will decide on an appropriate selling price for a product and an activity (production) level. Learners will make their decisions on the basis of appropriate cost mark-up, current market prices, break-even point and the required margin of safety. Other factors might be included in the information, but learners are expected to identify the most important ones when making their decisions.

For M2, learners will identify the different factors that can influence the figures used in a budget including production, sales, costs and profits in previous accounting periods, changes over time, moving averages, seasonal variations, price indices and performance and trends detected in previous accounting periods.

For M3, learners will identify the likely effects of changes that would occur in a budget if costs and selling price increased or decreased. Learners would base this on the budget prepared for P4 and would be expected to identify cost increases causing increases in overall costs and reductions in profits. They would also be expected to identify that an increase in costs might require a change to the selling price, where that price is based on cost plus. Learners might add that changes in costs would impact on the break-even point, necessitating an increase in budgeted activity levels to maintain profits.

For D1, learners will review the information used in carrying out break-even analysis and they will explain the limitations of these techniques. They should draw out any inaccurate assumptions the relationship between costs and income remaining the same at all levels of activity. They should also identify other limitations, such as assumptions that all units produced will be sold, that there is only one product and that all products make the same contribution. External factors such as the effects of inflation and interest rates might also be pertinent.

For D2, learners are expected to suggest possible budget variances, such as an increase in direct materials costs, and to consider likely causes such as the purchase of faulty materials causing wastage. Learners should then go on to suggest, for each possible variance, suitable management decisions or actions such as changing the supplier or buying better-quality materials. This criterion could be achieved through a case study where budgeted and actual figures are already given so that the learner has to calculate variances and make appropriate observations. Learners will be asked to work in groups and make a presentation. Learners must demonstrate a good understanding of the issues and the fact that this is probably the most important aspect of budgeting and budgetary control.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1	Production Costs.	Case study on costs and pricing.	Controlled class assessment.
P2, M1, D1	Breakeven.	Case study on break-even, including calculations.	Controlled class assessment.
P3, M2	Measuring Business Performance.	Case study detecting trends from information and predicting new ones..	Controlled class assessment.
P4, P5, M3, D2	Budgets, Targets and Monitoring.	Case study on budgets, targeting and monitoring.	Controlled class assessment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Business sector suite. This unit has particular links with the following unit titles in the Business suite:

Level 2	Level 3
Financial Forecasting for Business	Business Resources
Bookkeeping for Business	Business Accounting
	Financial Accounting
	Accounting Systems
	Computer Applications for Financial Management

This unit should only be delivered after *Business Accounting*.

This unit also links to the following draft National Occupational Standards for Accounting, particularly MA1, MA2, MA3, MA4.

Essential resources

Learners can find information using company annual reports and websites, journals, magazines and newspapers.

Access to a range of information resources to complete investigative assignments and case studies will be essential, including relevant CD ROMs and the internet, as will be access to computers for research and preparing cash flows (using a spreadsheet package) This will enhance delivery of this unit. Learners will also need access to relevant paper-based research material including published financial reports and books.

Employer engagement and vocational contexts

Visits to companies and from employees are useful to delivery of this unit. The use of vocational contexts is essential in the delivery and assessment of this unit. Sources of support to enable centres to initiate and establish links with industry, and to networks arranging visits to industry are given below:

Work Experience/Workplace learning frameworks – Centre for Education and Industry (University of Warwick): *www.warwick.ac.uk/wie/cei/*

Learning and Skills Network: *www.vocationallearning.org.uk*

Indicative reading for learners

Textbooks

Brammer J, Cox D, Fardon M and Penning A – *Active Accounting* (Osborne Books, 2002) ISBN 1872962378

Dyson J R – *Accounting for non-Accounting Students* (Prentice Hall, 2007) ISBN 0273709224

Fardon M and Cox D – *Accounting* (Osborne Books, 1998) ISBN 1872962289

Journals

Accountancy (CCH)

Accountancy Age (VNU Business Publications)

Accounting Technician (Centurion Publishing Group)

PQ Magazine (PQ Publishing)

Websites

www.accountancyage.com	Accountancy news and information
www.accountingtechnician.co.uk	Association of Accounting Technicians Online
www.accountingweb.co.uk	Accounting news, information and case studies
news.bbc.co.uk/1/hi/business/default.stm	The business pages of the BBC website
www.bized.co.uk	A business education resource site
www.bizhelp24.com	Help and support for businesses
www.businesslink.gov.uk	Business guidance for businesses, including accounting
www.canterbury.gov.uk	An example of a specific local business support website
www.statistics.gov.uk	UK Government statistics, including Retail Prices Index
www.thetimes100.co.uk/	The Times 100 case studies
www.tutor2u.net	Educational website for business and economics

Broadcasts

The following often feature business items are:

The Money Programme, BBC2 (weekly)

Working Lunch, BBC2 (daily)

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are …
Independent enquirers	investigating business finances costs and pricing
Creative thinkers	generating ideas about data
Reflective learners	reflecting on situations which result in changes in finances.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	planning and carrying out research into the different types of businesses
Creative thinkers	looking at costs and pricing examining reasons/solutions to business change adapting their skills as circumstances change
Reflective learners	setting goals, with success criteria, for researching business finances and frameworks inviting feedback on their own work and dealing positively with praise, setbacks and criticism evaluating their experiences and learning to inform future progress
Team workers	working in a group to discuss ideas and research taking responsibility for their own role managing activities to reach agreements and achieve results
Self-managers	seeking out challenges or new responsibilities and showing flexibility when priorities change dealing with competing pressures, including personal and work-related demands responding positively to change, seeking advice and support when needed
Effective participators	planning and carrying out research into budgets and monitoring.

● Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	researching business organisations and finances preparing/adjusting cash flow and breakeven
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	tabulating information
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	finding illustrative materials for presentations and tabulations about business and management accounting creating diagrams, presentations and tabulations
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	exploring, extracting and assessing the relevance of information from websites about business and management accounting
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: ● text and tables ● images ● numbers ● records	bringing together a variety of materials gathered through research preparing information to present to others
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	communicating with other members of a group

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	using numerical data in relation to business finances
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	carrying out group work investigating business attending team meetings making presentations about business
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading about regulations and companies to obtain data to compare businesses and to examine business trends
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively.	writing materials to provide information about business change producing accounts, graphs and tables, together with reports.