SAULT COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

BUDGET AND COST ACCOUNTING II

ACC 201-7

revised July 1980

Revised June 1981

BUDGETING AND COST ACCOUNTING II

ACC 201-7

TEXT: Cost Accounting - A Managerial Emphasis; Horngren.

REFERENCE TEXTS: Managerial Accounting, Revised Ed.; Ray H. Garrison
Fundamentals of Management Accounting; Anthony and Welsch

PRACTICE SET: The Judson Manufacturing Corp.

AIMS AND OBJECTIVES: To introduce to students the cost terms and basic methods and concerns of cost accounting.

PRE-REQUISITE: Successful completion of ACC 102

STUDENT EVALUATION:

There will be five regular tests and one final comprehensive test at the end of the semester. The weighting of the tests and practice set is as follows:

Regular (5)	50%
Final Test	40%
Practice Set	10%
	100%

Grading will be based on the following criteria:

80 and over	- A
70 to 79	- B
55 to 69	- C
below 55	- I

Students receiving an "I" (Incomplete) grade will be required to attend the make-up period at the end of the semester and write a comprehensive test at the conclusion of this period.

A student may be given an "R" (Repeat) grade at the conclusion of regular classes, and be denied the right to attend the make-up period if he/she achieves an overall average below 40%.

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Week No.	Unit	Topic
1	1	Review of Costs Terms - variable, fixed and mixed costs. - unit and total costs - manufacturing statement - direct and indirect costs
2-3		Job Costing - flow of product costs - perpetual inventories - job cost sheets - overhead application - input for a job cost system - treatment of over/under applied overhead
		TEST
4		Job Cost Practice Set
5,6,7	2	Standard Costing - review of flexible budgets - predetermined costs for: Materials - setting price and quantity standards - pinpointing responsibility - journal entries - analysis of variances Labour - setting rate and efficiency standards - handling of set-up time - pinpointing responsibility - analysis of variances Overhead - development of spending and efficiency standards for variable overhead - selecting the activity base for fixed overhead - analysis of variances - journal entries - disposing of under/over applied overhead
		TEST
8,9,10	3	Process Costing - characteristics of process costing - schedule of equivalent units produced - production report using a) weighted average method, b) fifo method, c) standard costs - interdepartmental transfers - journal entries - treatment of normal and abnormal spoilage

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Week No.	Unit	Topic
8,9,10	3	Continued...... - proration of spoilage - journal entries for abnormal spoilage - reworking defective units - accounting treatment for scrap Joint-Product and By-Product Costs - assignment of joint costs based on a) physical units; b) relative - sales value - decision-making and separable costs - treatment of costs beyond split-off - accounting for by-products based on a) net realizable value and b) net revenue approach. TEST
11,12	4	Direct Costing and Relevant Costs - contribution approach vs. the absorption approach - advantages of direct costing - decision-making and the contribution approach to gross profits - contribution approach for pricing - definition of relevant costs for decision-making - relevant costs for decisions on a) product linés, b) to make or buy and c) use of facilities. TEST
13,14	5	Capital Budgeting - definition of long-range budgeting - determining the cash inflows and/or cash savings - calculation of the pay-back period and the internal rate of return - defining net present value, and discounting the net cash flows. - discounting uneven cash flows - the influence of a) inflation, and b) income taxes on net present value. - ranking of various alternatives TEST
15		Review

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UNIT NO. 1 - REVIEW OF COST TERMS AND PURPOSES:

GENERAL OBJECTIVE:

To gain a workable knowledge of the common cost terms to be found in this course.

SPECIFIC OBJECTIVES:

Variable and Fixed Costs:

The student shall:

1. Define the terms variable and fixed costs.
2. Give 3 examples from a manufacturing concern, of both variable and fixed costs.
3. Define the term relevant range and explain it's meaning in regards variables as well as fixed costs.
4. State whether fixed costs can be controlled by management using discretionary costs as your reference.

Mixed Costs:

The student shall:

1. Define the term mixed costs.
2. State the formula for breaking a mixed cost into it's variable and fixed components.
3. Given two columns of figures at different volume or activity levels, choose those sets of mixed costs and break each into it's variable and fixed parts.

Unit and Total Costs:

The student shall:

1. Given total accumulated figures determining the most meaningful base for the situation and state the results in those terms.
2. State the difference between unit costs and variable costs and given an example to illustrate the point.

Product and Period Costs:

The student shall:

1. State the difference between product and period costs.

2. Given a list of manufacturing costs, separate the product from the period costs.

3. Show how product and period costs are handled differently on the balance sheet by preparing a simple statement illustrating the difference.

Manufacturing Costs:

The student shall:

1. List the 3 main categories of product costs.

2. Define the terms prime and conversion costs in conjunction with the aforementioned product costs.

3. List costs which one would normally find under the 3 categories of manufacturing costs.

4. Given a list of costs and expenses from a manufacturing concern, prepare in good statement form the manufacturing and income statement separating the 3 categories of manufacturing costs.

Direct and Indirect Costs:

The student shall:

1. Given a list of manufacture costs, list those which are direct from the indirect for a specific costing objective.

2. State in writing, how direct/indirect relationship differs from the product/period relationship.

Perpetual and Periodic Inventories:

The student shall:

1. State how the accounting treatment differs for the purchase of inventories under the two systems.

2. Show how the income statement differs under the two systems by preparing sample statements.

3. List the added control features of a perpetual system over that of the periodical.

4. State any differences that may arise when physically taking an inventory.

5. Give a possible business situation where a firm may only use part of either of the two systems.

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UNIT NO. 1 - Job Costing

GENERAL OBJECTIVE:

To gain an understanding of how a manufacturing concern would accumulate and control costs for a specific job.

SPECIFIC OBJECTIVES:

Comparison of Job Vs. Process Costing:

The student shall:

1. Give 3 examples for firms that would use job costing and 3 examples of typical process costing applications.

2. Define how costs are accumulated under job costing.

3. Define how costs are accumulated under process costing.

Flow of Product Costs:

The student shall:

1. Using T accounts, diagram the flow of costs in a manufacturing operation

2. Use the plant accounting terminology for each of the above T accounts.

3. Given a problem in job costing, be able to prepare journal entries corresponding to the flow of costs.

Documentation:

The student shall:

1. State what plant documentation would support each of the T account balances in the flow of costs.

2. Given a document per no. 1, complete it's detail according to the information provided.

3. Be able to design the documentation required on a job costing system.

4. Outline how he/she would attempt to control costs by the use of production documents.

Acc 201-7 - Unit No. 1

Overhead Application:

The student shall:

1. List a minimum of 5 costs that would be recorded in overhead control.

2. Detail how an overhead application rate is best calculated.

3. Show his/her understanding of the two overhead accounts by stating the difference between the two.

4. Given an overhead rate and it's base for application, prepare the journal entry to charge overhead to a job.

5. Given a list of overhead costs, record them by preparing the required journal entry.

6. Assuming an under/over application of overhead, state the alternatives available in disposing of this figure and your recommendation.

7. Explain why there could be an under/over application of overhead.

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Unit No. 2 - STANDARD COSTING

GENERAL OBJECTIVE:

To appreciate that standards properly prepared and communicated to production people can be a positive force for controlling costs and assisting plant personnel do their job efficiently.

SPECIFIC OBJECTIVES:

Types of Standards:

The student shall:

1. Define basic cost standards, theoretically perfect standards and currently attainable standards.

2. Select the standard he/she feels it most appropriate for industrial use and explain why it is best.

Budgets Vs. Standards:

The student shall:

1. Explain the difference between a standard and budgeted amount when the standards are currently attainable.

Material - Setting Price and Quantity Standards:

The student shall:

1. State who is responsible for establishing material price standards and material quantity standards.

2. State how the material price standard would be established.

3. State how the material usage standard would be established and whether it would allow for any waste, scrap or spoilage.

Material - Pinpointing Variance Responsibilities:

The student shall:

1. State the point at which a price variance or a usage variance is highlighted.

2. List any documentation that a manufacturing concerns could use to assist in highlighting these variances.

3. Give reasons why it is so important to point out variances at the time of happening or before and to person responsible.

4. State who is responsible for each variance in a medium sized manufacturing concern.

Material - Variance Trade-offs:

The student shall:

1. Give reasons why one unfavourable variance can be trade-off for à favourable one.

Material - Journal Entries:

The student shall:

1. Prepare journal entries to record the purchase of materials at other than the standard price with the price variance recorded at the time of purchase.

2. Prepare journal entries to record the requisition of materials by the production department, at standard or at variance with the standards.

Material - Analysis of Variances:

The student shall:

1. Given an actual purchase of materials, compare the actual price paid to the standard price and multiply this difference by the actual quantity purchased, to arrive at a material price variance.

2. Given an actual quantity of materials requisitioned or used by production, compare the actual quantity used with the standards quantity for the number of units produced and multiply this difference by the standard price, to arrive at a material usage variance.

Labour - Setting Rate and Efficiency Standards:

The student shall:

1. State who is responsible for establishing labour rate standards and labour efficiency standards.

2. State how the labour efficiency standard would be established and whether it would allow for any coffee breaks, down-time, etc.

Labour - Handling Set-up Time:

The student shall:

1. Determine how best to charge set-up time to a job in a machine operation

ACC 201-7 - Unit No. 2

Labour - Pinpointing Variance Responsibilities:

The student shall:

1. State the point at which a labour rate/efficiency-variance is highlighted.
2. List any documentation that a manufacturing concern could use to assist in highlighting these variances.
3. State who is responsible for each of the two variances in a medium-sized manufacturing concern.

Labour - Journal Entries:

The student shall:

1. Prepare journal entries to record the payroll at other than the standard rate with the rate variance being recorded at that time.
2. Prepare journal entries to record the time spent on the job at standard or at variance with the standard.

Labour - Analysis of Labour Variances:

The student shall:

1. Given an actual payroll, compare the actual rate paid to the standard rate and multiply this difference by the actual hours worked to arrive at a labour rate variance.
2. Given actual time cards, compare the actual time used with the standard time allowed for the number of completed units and multiply this difference by the standard rate, to arrive at a labour efficiency variance.

Overhead - Developin g the Variable Rate:

The student shall:

1. State how the variable overhead rate would be established assuming that all overhead costs can be broken into their variance and fixed parts.

Overhead - Journal Entries for Variable Costs:

The student shall:

1. Prepare journal entries to record the incurrence of costs at other than standard price with the spending variance recorded at the time of record.
2. Prepare journal entries to record the allocation of overhead to work in process at standard or at variance with standard.

ACC 201-7 - Unit No. 2

Overhead - Analysis of Variable Overhead Variances:

The student shall:

1. Given the actual costs of variable overhead, compare this actual cost to the quantity of actual production or actual hours worked times the standard rate to arrive at the spending variance.

2. Given the above-mentioned actual production or hours worked times the standard rate, compare this with the standard hours allowed for the good production times the standard rate per hour or unit, to arrive at the efficiency variance.

Overhead - Selecting the Activity Level for Fixed Overhead:

The student shall:

1. Select that level of production which, over a long period of say 5 years, will satisfy average consumer demand.

2. Calculate the standard fixed overhead rate per unit using the above-determined normal capacity. (This rate should be used for costing only and not for control).

Overhead - Journal Entries for Fixed Costs:

The student shall:

1. Prepare journal entries to record the incurrence of actual fixed factory overhead recorded as actually incurred.

2. Prepare journal entries to record the application of fixed overhead to work in process at the standard rate times the actual production expressed in standard hours allowed.

Overhead - Analysis of Fixed Overhead Variances:

The student shall:

1. Given the actual cost of fixed overhead, compare this actual cost to the standard overhead applied to work in process to arrive at the total fixed variance.

2. Compare the actual cost to the budget for fixed overhead (this figure remains constant regardless of volume and is the basis used for calculating a fixed standard cost per unit). This provides the budget variance.

3. Compare this budgeted figure with the fixed overhead applied to work in process (fixed overhead rate x standard hours allowed for the production). This provides the capacity of volume variance.

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Should Overhead be Split into Variable and Fixed:

The student shall:

1. Determine whether a particular company is justified in attempting to break overhead costs into their variable and fixed portion.

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Unit No. 3 - Process Costing

The Student shall:

1. Define the purpose and method of cost accumulation for cost centres.
2. Distinguish between job order costing and process costing.
3. Give examples of industries that use a process cost system to determine product cost.
4. Be able to calculate the equivalent units produced for an accounting period.
5. Understand the cost flow assumptions under a process cost system.
6. Prepare a product report using these various cost flow assumptions (weighted average, FIFO, standard costs, etc.)
7. Journalize the necessary entries to reflect the change in inventories.
8. Record journal entries for interdepartmental transfer.
9. Distinguish between normal and abnormal spoilage.
10. Know the treatment of normal and abnormal spoilage in the production report.
11. Know the general accounting procedures for spoilage.
12. Know the accounting treatment for defective units and scrap.
13. Understand the differences between spoilage, defective units and scrap.
14. Apply shrinkage and waste to a standard cost system.

Joint Product Costs and By-Product Costs

The Student shall:

1. Define the characteristics of joint costs.
2. Determine the unit cost of a product using the relative sale value approach for joint costs.
3. Determine the unit cost of a product using the physical unit measurement approach.
4. Know the treatment of product costs beyond the split-off.

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ACC 201-7 Unit No. 3

The student shall:

5. Understand the irrelevance of joint costs in decisions whether to sell or process a product further.

6. Know the accounting treatment for by-products using the net revenue method and the net realizable value method.

7. Journalize the by-product costs according to the method adopted.

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Unit No. 4 - Direct Costing

GENERAL OBJECTIVE:

To understand the benefits, yet also the limitations of a direct costing system.

SPECIFIC OBJECTIVES:

Contribution Approach Vs. Traditional Approach:

The Student shall:

1. Define the term "Contribution Approach".

2. Define the term "Traditional Approach".

3. Show how the two methods differ in statement presentation by preparing comparative statements.

Advantages of the Contribution Method (Direct Costing):

The Student shall:

1. Explain why the contribution approach assists management in making product decisions.

2. State the formula and be able to make the necessary calculations to show how the contribution approach is used for break event decisions whether it be a department, product, etc.

Timing:

The Student shall:

1. Show how the income of a period would be the same under either the traditional (absor tion) approach of direct costing providing there is not change in the inventories by preparing the income statements.

2. Prepare the income statements to show the income difference should there be an inventory change.

3. Explain that due to the above two points, the income difference is strictly a timing difference and over a number of periods, the incomes would equal.

4. State whether fixed costs should be written off to the periods expenses or whether they should partially be charges to the work in process and finished goods inventory - explain your decision.

5. State the stand on direct costing as taken by the accounting and taxation bodies.

Acc 201-7 Unit No. 4

RELEVANT COSTS AND THE CONTRIBUTION APPROACH

GENERAL OBJECTIVES:

To understand which costs are relevant in decision making and to gain knowledge of the use of the contribution approach to selecting alternatives.

SPECIFIC OBJECTIVES:

Relevant Costs:

The Student Shall:

1. Know the relevance of future costs in decision making.
2. Distinguish between historical costs and relevant costs.
3. Know the qualitative and quantitative factors associated with decision making.
4. Give the costs that are relevant in short run and long run decisions.

Contribution Approach:

The Student Shall:

1. State the reason why the contribution method to pricing is superior to the absorption method.
2. Show how prices can be set using a target pricing formula.
3. Be able to use the contribution approach for decisions on:

    - to make or buy product components.
    - to eliminate a product line or a department.
    - to buy or lease equipment.

4. Explain the relevance of historical costs in the replacement of equipment.

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Unit No. 5 - Capital Budgeting

The Student Shall:

1. Know the definition of capital budgeting.

2. State the different methods used in evaluating a long-term project.

3. Be able to determine the relevant costs associated with a long-term investment.

4. Understand the relevance of time value of money.

5. Understand the relevance of net cash flows.

6. Evaluate a long-term capital project using:

   - discounted cash flows.
   - internal rate of return.
   - pay-back period.

7. Sketch a net present value model.

8. Be able to compare the various methods stating the advantages and disadvantages of each.

9. Understand the preliminary work required in order to evaluate a project and the problem of uncertainty.

10. Understand the influence of inflation on evaluating a long-term project.

11. Know the effect on projects of:

    - future disposal values.
    - current disposal values.
    - depreciation.
    - unequal lives of various alternatives.

12. Know the effect of income tax on cash flow.

13. Understand the procedure for ranking projects.

14. Know how to determine the minimum desired rate of return.

15. Be able to calculate the weighted average of capital.

16. Know the relevant factors to be considered for equipment replacement.