

**ACC3302 Cost Accounting: ACC3302 Cost
Accounting Online Fall 2018**

ACC 3302 Chapter 13

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1. value:
50.00 points

Problem 13-51 Prepare a Production Budget (LO 13-4)

EcoSacks manufactures cloth shopping bags. The controller is preparing a budget for the coming year and asks for your assistance. The following costs and other data apply to bag production:

Direct materials per bag	
1.40 yard cotton at \$4.40 per yard	
0.60 yards canvas finish at \$12.40 per yard	
Direct labor per bag	
0.90 hour at \$18.40 per hour	
Overhead per bag	
Indirect labor	\$1.00
Indirect materials	0.60
Power	0.80
Equipment costs	1.70
Building occupancy	1.30
Total overhead per unit	<u>\$5.40</u>

You learn that equipment costs and building occupancy are fixed and are based on a normal production of 640,000 units per year. Other overhead costs are variable. Plant capacity is sufficient to produce 830,000 units per year.

Labor costs per hour are not expected to change during the year. However, the cotton supplier has informed EcoSacks that it will impose a 20 percent price increase at the start of the coming budget period. No other costs are expected to change.

During the coming budget period, EcoSacks expects to sell 580,000 bags. Finished goods inventory is targeted to increase from the current balance of 160,000 units to 250,000 units to prepare for an expected sales increase the year after next as a result of legislation in several states regarding plastic bags. Production will occur evenly throughout the year. Inventory levels for cotton and canvas are expected to remain unchanged throughout the year. There is no work-in-process inventory.

Required:

a. Prepare a production budget for the coming year.

ECOSACKS	
Production Budget	
For the Coming Year	
(in units)	
Total needs	
Units to be produced	

b. Estimate the materials, labor, and overhead costs for the coming year.

Material costs	
Labor costs	
Overhead costs	

References**eBook & Resources****Worksheet**Problem 13-51 Prepare a
Production Budget (LO 13-4)[Check my work](#)

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50.00 points

Problem 13-54 Budgeted Purchases and Cash Flows (LO 13-4, 5, 6)

Mast Corporation seeks your assistance in developing cash and other budget information for May, June, and July. At April 30, the company had cash of \$12,000, accounts receivable of \$862,000, inventories of \$163,185, and accounts payable of \$43,294. The budget is to be based on the following assumptions.

- Each month's sales are billed on the last day of the month.
- Customers are allowed a 2 percent discount if payment is made within 10 days after the billing date. Receivables are recorded in the accounts at their gross amounts (not net of discounts).
- The billings are collected as follows: 75 percent within the discount period, 10 percent by the end of the month, and 12 percent by the end of the following month. Three percent is uncollectible.

Purchase data are as follows.

- Of all purchases of merchandise and selling, general, and administrative expenses, 61 percent is paid in the month purchased and the remainder in the following month.
- The number of units in each month's ending inventory equals 115 percent of the next month's units of sales.
- The cost of each unit of inventory is \$11.
- Selling, general, and administrative expenses, of which \$4,000 is depreciation, equal 15 percent of the current month's sales.
- Actual and projected sales follow:

	Dollars	Units
March	\$220,800	13,800
April	177,600	11,100
May	206,400	12,900
June	198,400	12,400
July	192,000	12,000
August	15,200	12,200

Required:

a. Compute the budgeted purchases in dollars for May.

Budgeted purchases

b. Compute the budgeted purchases in dollars for June.

Budgeted purchases

c. Compute the budgeted cash collections during May. (Do not round intermediate calculations.)

Budgeted cash collections

d. Compute the budgeted cash disbursements during June. (Do not round intermediate calculations.)

Budgeted cash disbursements	
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e. Compute the budgeted number of units of inventory to be purchased during July.

Budgeted number of units	
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References**eBook & Resources****Worksheet**

Problem 13-54 Budgeted
Purchases and Cash Flows
(LO 13-4, 5, 6)

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1.

value:
0.33 points**Exercise 13-22 Estimate Sales Revenues (LO 13-3)**

Stubs-R-Us is a local event ticket broker. Last year, the company sold 980,000 tickets with an average commission of \$5. Because of the general economic climate, Stubs expects ticket volume to decline by 20 percent. In addition, employees at a local insurance company headquarters accounted for 5 percent of Stubs' volume. The headquarters relocated to another state and all the employees closed their accounts.

Offsetting these factors is the observation that the average commission per sale is likely to increase by 10 percent because the average ticket prices are expected to be larger in the coming year.

Required:

Estimate commission revenues for Stubs-R-Us for the coming year.

Commission revenues

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Sales Revenues (LO 13-3)[Check my work](#)

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2.

value:
0.33 points**Exercise 13-29 Estimate Production and Materials Requirements (LO 13-4)**

The Casings Plant of Wyoming Machines makes plastics shells for the company's calculators. (Each calculator requires one shell.) For each of the next two years, Wyoming expects to sell 650,000 calculators. The beginning finished goods inventory of shells at the Casings Plant is 90,000 units. However, the target ending finished goods inventory for each year is 20,000 units.

Each unit (shell) requires 6 ounces of plastic. At the beginning of the year, 250,000 ounces of plastic are in inventory. Management has set a target to have plastic on hand equal to two months' sales requirements. Sales and production take place evenly throughout the year.

Required:

- a. Compute the total targeted production of the finished product for the coming year.

Total targeted production in units

- b. Compute the required amount of plastic to be purchased for the coming year. (Do not round intermediate calculations.)

Materials to be purchased in ounces

References**eBook & Resources****Worksheet**Exercise 13-29 Estimate
Production and Materials
Requirements (LO 13-4)[Check my work](#)

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3.

value:
0.33 points**Exercise 13-33 Estimate Cash Collections (LO 13-5)**

Minot Corporation is preparing its cash budget for August. The following information is available concerning its accounts receivable:

Estimated credit sales for August	\$ 180,000
Actual credit sales for July	\$ 135,000
Estimated collections in August for credit sales in August	20%
Estimated collections in August for credit sales in July	75%
Estimated collections in August for credit sales prior to July	\$ 14,400
Estimated write-offs in August for uncollectible credit sales	\$ 7,200
Estimated provision for bad debts in August for credit sales in August	\$ 6,300

Required:

What is the estimated amount of cash receipts from accounts receivable collections in August?

Estimated cash receipts

References**eBook & Resources****Worksheet**

Exercise 13-33 Estimate
Cash Collections (LO 13-5)

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4. value:
0.33 points

Exercise 13-34 Estimate Cash Collections (LO 13-5)

Ewing Company is preparing a cash budget for September. The following information on accounts receivable collections is available from past collection experience:

Percent of current month's sales collected this month	25%
Percent of prior month's sales collected this month	63
Percent of sales two months prior to current month collected this month	6
Percent of sales three months prior to current month collected this month	3

The remaining 3 percent is not collected and is written off as bad debts. Credit sales to date are:

September—estimated	\$ 200,000
August	180,000
July	160,000
June	190,000

Required:

What are the estimated cash receipts from accounts receivable collections in September?

Estimated cash receipts

References **eBook & Resources**

Worksheet Exercise 13-34 Estimate
Cash Collections (LO 13-5)

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General Manager

1900-1901

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5. value:
0.33 points

Exercise 13-30 Estimate Purchases and Cash Disbursements (LO 13-4, 5)

Midland Company buys tiles and prints different designs on them for souvenir and gift stores. It buys the tiles from a small company in Europe, so at all times it keeps on hand a stock equal to the tiles needed for three months' sales. The tiles cost \$1.00 each and must be paid for in cash. The company has 28,000 tiles in stock. Sales estimates, based on contracts received, are as follows for the next six months:

January	12,500
February	17,000
March	12,400
April	14,700
May	9,800
June	6,700

Required:

a. & b. Estimate purchases (in units) and cash required to make purchases in January, February, and March.

MIDLAND COMPANY			
Merchandise Purchases Budget			
For the Period Ended March 31			
(in units)			
	January	February	March
Units to be purchased			
Estimated cost			

References**eBook & Resources****Worksheet**

Exercise 13-30 Estimate
Purchases and Cash
Disbursements (LO 13-4, 5)

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6.

value:
0.35 points

Problem 13-54 Budgeted Purchases and Cash Flows (LO 13-4, 5, 6)

Mast Corporation seeks your assistance in developing cash and other budget information for May, June, and July. At April 30, the company had cash of \$11,000, accounts receivable of \$863,000, inventories of \$130,680, and accounts payable of \$31,528. The budget is to be based on the following assumptions.

- Each month's sales are billed on the last day of the month.
- Customers are allowed a 2 percent discount if payment is made within 10 days after the billing date. Receivables are recorded in the accounts at their gross amounts (not net of discounts).
- The billings are collected as follows: 65 percent within the discount period, 20 percent by the end of the month, and 12 percent by the end of the following month. Three percent is uncollectible.

Purchase data are as follows.

- Of all purchases of merchandise and selling, general, and administrative expenses, 58 percent is paid in the month purchased and the remainder in the following month.
- The number of units in each month's ending inventory equals 120 percent of the next month's units of sales.
- The cost of each unit of inventory is \$11.
- Selling, general, and administrative expenses, of which \$4,000 is depreciation, equal 10 percent of the current month's sales.
- Actual and projected sales follow:

	Dollars	Units
March	\$204,800	12,800
April	161,600	10,100
May	158,400	9,900
June	182,400	11,400
July	192,000	12,000
August	15,200	12,200

Required:

a. Compute the budgeted purchases in dollars for May.

Budgeted purchases

b. Compute the budgeted purchases in dollars for June.

Budgeted purchases

c. Compute the budgeted cash collections during May. (Do not round intermediate calculations.)

Budgeted cash collections

d. Compute the budgeted cash disbursements during June. (Do not round intermediate calculations.)

Budgeted cash disbursements	
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e. Compute the budgeted number of units of inventory to be purchased during July.

Budgeted number of units	
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References

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Worksheet

Problem 13-54 Budgeted
Purchases and Cash Flows
(LO 13-4, 5, 6)

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1.

value:
1.00 points

A-12 Present Value of Cash Flows

Star City is considering an investment in the community center that is expected to return the following cash flows: Use [Exhibit A.8](#).

Year	Net Cash Flow
1	\$ 33,000
2	63,000
3	93,000
4	93,000
5	113,000

This schedule includes all cash inflows from the project, which will also require an immediate \$213,000 cash outlay. The city is tax-exempt; therefore, taxes need not be considered.

Required:

a. What is the net present value of the project if the appropriate discount rate is 22 percent? (Round PV factor to 3 decimal places. Negative amount should be indicated by a minus sign.)

Net present value	
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b. What is the net present value of the project if the appropriate discount rate is 12 percent? (Round PV factor to 3 decimal places. Negative amount should be indicated by a minus sign.)

Net present value	
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References

Worksheet	A-12 Present Value of Cash Flows
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2.

value:
1.00 points

A-13 Present Value of Cash Flows

Rush Corporation plans to acquire production equipment for \$630,000 that will be depreciated for tax purposes as follows: year 1, \$126,000; year 2, \$216,000; and in each of years 3 through 5, \$96,000 per year. An 8 percent discount rate is appropriate for this asset, and the company's tax rate is 40 percent. Use [Exhibit A.8](#) and [Exhibit A.9](#).

Required:

a. Compute the present value of the tax shield resulting from depreciation. (Round PV factor to 3 decimal places and other intermediate calculations to nearest whole number.)

Present value of the tax shield

b. Compute the present value of the tax shield from depreciation assuming straight-line depreciation (\$126,000 per year). (Round PV factor to 3 decimal places and other intermediate calculations to nearest whole number.)

Present value of the tax shield

References

Worksheet

A-13 Present Value of Cash
Flows[Check my work](#)

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1.

value:
33.00 points

A-12 Present Value of Cash Flows

Star City is considering an investment in the community center that is expected to return the following cash flows: Use [Exhibit A.8](#).

Year	Net Cash Flow
1	\$ 37,000
2	67,000
3	97,000
4	97,000
5	117,000

This schedule includes all cash inflows from the project, which will also require an immediate \$217,000 cash outlay. The city is tax-exempt; therefore, taxes need not be considered.

Required:

a. What is the net present value of the project if the appropriate discount rate is 26 percent? (Round PV factor to 3 decimal places. Negative amount should be indicated by a minus sign.)

Net present value

b. What is the net present value of the project if the appropriate discount rate is 10 percent? (Round PV factor to 3 decimal places. Negative amount should be indicated by a minus sign.)

Net present value

References

Worksheet

A-12 Present Value of Cash
Flows[Check my work](#)

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2.

value:
33.00 points

A-16 Sensitivity Analysis In Capital Investment Decisions

Square Manufacturing is considering investing in a robotics manufacturing line. Installation of the line will cost an estimated \$9.1 million. This amount must be paid immediately even though construction will take three years to complete (years 0, 1, and 2). Year 3 will be spent testing the production line and, hence, it will not yield any positive cash flows. If the operation is very successful, the company can expect after-tax cash savings of \$6.1 million per year in each of years 4 through 7. After reviewing the use of these systems with the management of other companies, Square's controller has concluded that the operation will most probably result in annual savings of \$4.3 million per year for each of years 4 through 7. However, it is entirely possible that the savings could be as low as \$1.9 million per year for each of years 4 through 7. The company uses a 15 percent discount rate. Use [Exhibit A.8](#).

Required:

Compute the NPV under the three scenarios. (Round PV factor to 3 decimal places. Enter your answers in thousands of dollars. Negative amounts should be indicated by a minus sign.)

	Best Case	Expected	Worst Case
Net present value			

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References

Worksheet

A-16 Sensitivity Analysis in
Capital Investment Decisions

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3.

value:
34.00 points

A-14 Present Value Analysis in Nonprofit Organizations

The Johnson Research Organization, a nonprofit organization that does not pay taxes, is considering buying laboratory equipment with an estimated life of seven years so it will not have to use outsiders' laboratories for certain types of work. The following are all of the cash flows affected by the decision: Use [Exhibit A.8](#).

Investment (outflow at time 0)	\$5,300,000
Periodic operating cash flows:	
Annual cash savings because outside laboratories are not used	1,450,000
Additional cash outflow for people and supplies to operate the equipment	250,000
Salvage value after seven years, which is the estimated life of this project	450,000
Discount rate	14%

Required:

Calculate the net present value of this decision. (Round PV factor to 3 decimal places.)

Net present value

Should the organization buy the equipment?

- ☐ Yes
☐ No

References

Worksheet

A-14 Present Value Analysis
in Nonprofit Organizations

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