CHAPTER 1

Managerial aCcounting concepts and Principles

|  |
| --- |
| Related Assignment Materials |
| **Student Learning Objectives** | **Questions** | **Quick Studies\*** | **Exercises\*** | **Problems\*** | **Beyond the Numbers** |
| **Conceptual objectives:**  |
| C1. Explain the purpose and nature of, and the role of ethics in, managerial accounting. |  1, 2, 3, 13 |  1-1 |  1-1, 1-14 |   |  1-1, 1-3, 1-5, 1-7, 1-8, 1-9 |
| C2. Describe accounting concepts useful in classifying costs. |  4, 6, 7, 8, 9, 10, 17 |  1-2, 1-4,  1-5 |  1-2, 1-4,  1-10, 1-17  |  1-1, 1-4,  |  1-2, 1-7, 1-8 |
| C3. Define product and period costs and explain how they impact financial statements. |  5, 7, 11,  |  1-3 |  1-3, 1-6 |  1-1, 1-4 |  1-3 |
| C4. Explain how balance sheets and income statements for manufacturing and merchandising companies differ. |  12, 14, 15, 16, |  1-6 |  1-7, 1-9 |  1-2, 1-3 |  |
| C5. Explain manufacturing activities and the flow of manufacturing costs. |  17, 14, 19 |  1-9, 1-12, 1-13 |  1-12 |  |  1-6 |
| C6. Describe trends in managerial accounting. |  |  1-11 |  1-5 |   |  1-4, 1-7 |
| **Analytical objectives:**  |
| A1 Assess raw materials inventory management using raw materials inventory turnover and days’ sales in raw materials inventory. |  23, 24, 25  |  1-14 |   |  1-5 |  |
| **Procedural objectives:** |
| P1. Compute cost of goods sold for a manufacturer. |  |  1-7, 1-8 |  1-8, 1-11,  1-16 |  1-3 |  |
| P2. Prepare a manufacturing statement and explain its purpose and links to financial statements. |  17, 20, 21, 22 |  1-10 |  1-8, 1-9,  1-13, 1-14, 1-15, 1-16 |  1-5 |  1-6 |

**\**See additional information on next page that pertains to these quick studies, exercises and problems.***

# Additional Information on Related Assignment Material

|  |
| --- |
| **Corresponding problems** in set B (in text) also relate to learning objectives identified in grid on previous page. **The Serial Problem** for *Success Systems* continues in this chapter. Problem 1-3A can be completed using ***Excel***. |
| ***Connect*** reproduces assignments online, in static or algorithmic mode, which allows instructors to monitor, promote, and assess student learning. It can be used for practice, homework, or exams**.** |

# Synopsis of Chapter Revision

# Roseicollis Technologies--New opener and entrepreneurial assignment.

* Revised discussion of the purpose of managerial accounting.
* Revised discussion and exhibit on the nature of managerial accounting.
* Revised discussion of cost classifications and their uses.
* Reduced number of cost classifications from five to three.
* Revised exhibit and example of direct versus indirect costs.
* Added several examples to exhibit on multiple cost classifications.
* Revised discussion of manufacturer’s costs.
* Added new exhibit comparing the balance sheet reporting (current assets section) of manufacturing, merchandising, and service companies.
* Added new exhibit comparing the income statement reporting of manufacturing, merchandising, and service companies.
* Reduced level of detail in exhibit on income statement reporting.
* Revised terminology (throughout) to work in process instead of goods in process.
* Revised discussion of the flow of manufacturing costs.
* Changed the title of Manufacturing Statement to Schedule of Cost of Goods Manufactured.
* Used a four-step process to illustrate the schedule of cost of goods manufactured.
* Added T-accounts to show the flow of costs for the schedule of cost of goods manufactured.
* Added a third column to the schedule of cost of goods manufactured for enhanced presentation.
* Simplified exhibit on manufacturing cost flows across the financial statements.
* Added discussion of corporate social responsibility.
* Added sustainability section--discussion of Nestle’s corporate social responsibility activities.
* Revised several end-of-chapter assignments, including 6 new Quick Study exercises and 4 new Exercises.

|  |  |
| --- | --- |
| Chapter Outline | Notes |
| **I. Introduction to Managerial Accounting**—also called *management accounting* 1. Purpose of Managerial Accounting—to provide financial and nonfinancial information to managers and other *internal* decision makers of an organization.
2. *Cost of products* *and services*⎯this information is very important to managers when making *planning* and *control* decisions. This includes predicting the future costs of producing the same or similar items. Predicted costs are used in:

a. product pricing. b. profitability analysis.c. deciding whether to make or buy a product or component.2. *Planning* is the process of setting goals and making plans to achieve them.1. *Strategic plans* usually set the *long-term* direction of a firm (considers potential opportunities such as new products, new markets and capital investments).
2. *Short-term plans* often cover a one-year period which, when translated in monetary terms, is known as the *budget*.

3. *Control* is the process of monitoring planning decisions and evaluating the organization's activities and employees. 1. Control includes *measurement and evaluation* of actions, processes and outcomes.
2. Control feedback allows managers to take timely corrective actions to avoid undesirable outcomes.
3. Nature of Managerial Accounting—illustrated by comparing the seven key differences between *managerial to financial*accounting:
4. Users and decision makers
5. In financial—Investors, creditors and other users external to the organization.
6. In managerial—Managers, employees and decision makers *internal* to the organization.
7. Purpose of information
8. In financial—Assist external users in making investment, credit and other decisions.
9. In managerial—Assist managers in making *planning*, and *control* decisions*.*
 |  |

|  |  |
| --- | --- |
| Chapter Outline | Notes |
| 3. Flexibility of practice1. In financial—Structured and often controlled by GAAP.
2. In managerial—Relatively *flexible* (no GAAP constraints). An important question the manager must ask—is the information being collected and reported useful for planning, decision making and control purposes?
 |  |
| 4. Timeliness of information1. In financial—Often available only after the audit is complete.
2. In managerial—Available quickly without the need to wait for an audit.

5. Time dimension1. In financial—Focus on historical information with some predictions.
2. In managerial—Many *projections and estimates*; historical information also presented.
3. Focus of information
4. In financial—Emphasis on whole organization.
5. In managerial—Emphasis on organization's projects, processes and subdivisions.
6. Nature of information
7. In financial—Monetary information.
8. In managerial—Mostly monetary; but also nonmonetary information such as customer satisfaction data, product defect rates, etc.
9. Managerial Decision Making—managerial accounting information is primarily used for internal decisions about a company's activities but financial and managerial accounting are not entirely separate since both can affect people's decisions and actions.
 |  |
| D. Fraud and Ethics in Managerial Accounting—important factors in running business operations. Fraud involves the deliberate misuse of one’s job for personal gain, through the deliberate misuse of the employer’s assets.1. Three factors must exit for a person to commit fraud (called *the fraud triangle*):a. Opportunityb. Financial pressure.c. Rationalization |  |
|  |  |

|  |  |
| --- | --- |
| Chapter Outline | Notes |
| 2. Implications for managerial accounting—fraud increases business costs and management must therefore rely on and *internal control systems* that define policy and procedures to:a. Urge adherence to company policies.b. Promote efficient operations.c. Ensure reliable accounting.d. Protect assets.3. Ethics are beliefs that distinguish right from wrong. The IMA (Institute for Management Accountants) has issued a code of ethics to help accountants involved in solving ethical dilemmas and provide a “road map” for resolving ethical conflicts.1. **Managerial Cost Concepts**—Costs can be classified based on any one or combination of the five classifications listed below. To classify it is necessary to understand costs and operations.
 |  |
| 1. Fixed vs. Variable: At a basic level a cost can be classified by how it behaves with changed in the volume of activity.
2. Fixed Cost: a cost that does not change in total with changes in the volume of an activity (within a certain range of activity known as an activity’s *relevant range*)
3. Variable Cost: a cost that changes in total in proportion to changes in volume of an activity.
 |  |
| 1. Direct vs. Indirect: a cost is traced to a cost object (a product, process, department, or customer to which costs are assigned). Cost is classified as either a *direct or indirect cost*. To classify must identify the cost object.
2. Direct costs—those traceable to a single cost object.
3. Indirect costs—those that cannot be traced to a single cost object.
4. Product vs Period Costs: costs classified as capitalized inventory (product cost) or expensed as incurred (period cost).
 |  |
| 1. Product costs—expenditures necessary and integral to finished products. Include direct materials, direct labor, and indirect manufacturing costs called overhead. First assigned to inventory (on balance sheet) and flow to income statement when become part of cost of goods sold.2. Period costs—expenditures identified more with a time period than finished products. Includes selling and general administrative expenses on the income statement.1. Identification of Cost Classifications—understanding how to classify costs in several different ways enables managers to use cost information for a variety of decisions. Potential multiple classifications are shown in Exhibit 1-9 in the text.
 |  |

|  |  |
| --- | --- |
| Chapter Outline | Notes |
| 1. **Reporting Manufacturing Activities—**financial statements for manufacturing companies have some unique features resulting from their activity of producing goods from materials and labor.
2. Manufacturing Costs
3. Direct Materials—tangible components of a finished product; Direct Material Costs are the expenditures that are separately and readily traced through the manufacturing process to finished goods.
4. Direct Labor—refers to the efforts of employees who physically convert materials into finished products. Direct Labor costs are the wages and salaries for direct labor that are separately and readily traced through the manufacturing process to finished goods.
5. Factory Overhead (also called manufacturing overhead)—consists of all manufacturing costs that are not direct materials or direct labor; costs that cannot be separately or readily traced to finished goods. Include indirect materials and indirect labor and other costs associated with the factory
	1. Indirect Materials—used in manufacturing but not clearly identified with specific product units. Often direct materials can be classified as indirect when their costs are very low.
	2. Indirect Labor—wages and salaries for those workers’ efforts not linked to specific units or batches of product. Include the wages of those who assist or supervise the manufacturing process. The overtime wages of the direct labor employees is considered indirect labor. Other indirect labor includes the wages of the maintenance and repair workers.
6. Prime and Conversion Costs
	1. *Prime costs*—direct materials and direct labor (expenditures directly associated with the manufacturing of finished goods).
	2. *Conversion costs--*direct labor and overhead costs *(*expenditures incurred in the process of converting raw materials to finished goods).
 |  |
| Chapter Outline | Notes |
| 1. Manufacturer’s Balance Sheet—carry several unique assets and usually reports these three inventories:
2. Raw Materials Inventory—goods a company acquires to use in making products Includes both direct and indirect materials.
3. Work in Process Inventory*—* consists of products in the process of being manufactured but not yet complete.
4. Finished Goods Inventory—consists of completed products ready for resale.
5. Manufacturer’s Income Statement—the main difference between a merchandiser’s and manufacturer’s income statement is in items that make-up cost of goods sold (CGS).
 |  |
| 1. A Merchandiser computes cost of goods sold as:

 Beginning *merchandise* inventory+ cost of goods *purchased* Cost of goods available for Sale - Ending *merchandise* inventory Cost of Goods Sold |  |
| 1. A Manufacturer computes cost of goods sold as:

 Beginning *finished goods* inventory + cost of goods *manufactured\** Cost of goods available for Sale - Ending *finished goods* inventory Cost of Goods Sold1. *\*Cost of goods manufactured* is the sum *of direct materials, direct labor*, and *overhead costs* incurred in production.
 |  |
| D. Flow of Manufacturing Activities—the three manufacturing activities are:1. Materials Activities

 Beginning raw materials+ Raw materials Purchases Raw materials available for use in production- Ending Raw Materials Inventory Raw Materials Used in Production1. Production Activities—Four factors come together in production:
2. Beginning Work in process inventory—consists of partly produced goods from the previous period.
3. Direct materials used—traceable materials added during the period.
4. Direct labor used—traceable labor added during the period.
 |  |
| 1. Overhead used—nontraceable manufacturing costs added during the period.
 |  |

|  |  |
| --- | --- |
| Chapter Outline | Notes |
|  N*ote*: The production activity results in goods either finished or unfinished. Both groups represent *product costs*. The cost of finished goods make up the cost of goods manufactured for the year. Unfinished goods are identified as ending goods in process inventory.1. Sales Activities—Newly completed units are combined with beginning finished goods inventory to make up total finished goods available for sale. The cost of those goods that are sold during the year is reported on the income statement.
 |  |
| E. Manufacturing Statement (also called the schedule of manufacturing activities or the schedule of cost of goods manufactured)—reports costs of both materials and production activities. Contains information used by management for planning and control. It is not a general purpose financial statement. It is divided into four parts: 1. Direct material used—determined by adding the beginning raw materials inventory to this period's materials purchases to obtain total raw materials available for use during year and then subtracting ending raw materials inventory which was determined from a physical count.
2. Direct labor incurred—includes payroll taxes and fringe benefits and is taken directly from the direct labor account balance.
3. Overhead costs—generally lists each important factory overhead item along with its cost. If a summary number is used, a separate detailed schedule is usually prepared.
4. Computation of *cost of goods manufactured*—as follows:

Direct MaterialsDirect LaborFactory OverheadTotal Manufacturing Costsadd: Beginning Work in ProcessTotal Work In Process InventoryLess: Ending Work In Process InventoryCost of Goods Manufactured |  |
|  |  |
|  |  |
| Chapter Outline | Notes |
|

|  |  |
| --- | --- |
| 1. **Trends in Managerial Accounting**
 |  |
| 1. Customer Orientation—increase emphasis on understanding changing needs and wants of customers as most important part of business.
2. Global Economy—expands competitive boundaries and provides customers more choices.
3. E-Commerce—customers expect and demand to be able to buy items electronically.
4. Service Economy—service businesses account for 60% to 70% of total economic activity. Lean business model—goal is to eliminate waste while “satisfying the customer” and “providing a positive return to the company”.
5. Lean Practices—the philosophy of *continuous improvement* has led to adoption of :
6. Total Quality Management (TQM)—applies quality improvement to all aspects of business.
7. Just-in-time Manufacturing (JIT)—system that acquires inventory and produces only when and order is received, a *demand-pull* system, that delivers to customers on time.
8. Value Chain—series of activities that add value to products or services.
9. Corporate Social Responsibility (CSR)—concept that goes beyond just following the law. In addition to maximizing shareholder value, the corporation must often consider the demands of the stakeholders including society.
 |  |

 |  |
| 1. **Decision Analysis**
2. Raw Material Inventory Turnover
3. Assess how effectively raw materials inventory is managed.
4. Calculated as raw materials inventory used divided by average raw materials inventory.
5. Reveals how many times a company turns over its raw materials inventory during a period. High ratio is generally preferred as long as demand can be met.
6. Days’ Sales in Raw Materials Inventory
7. Measures how long it takes raw materials to be used in production.
8. Calculated as ending raw materials inventory divided by raw materials used, and multiplied by 365.
 |  |

**Alternate Demo Problem 1**

**Using the following information for Superior Manufacturing Company, prepare a manufacturing statement and an income statement for the year ended December 31, 2015. (Assume a 25% income tax.) Further assume that all raw materials used were direct materials and the factory overhead costs were totaled for you on a separate schedule..**

|  |  |
| --- | --- |
|  |  |
|  |  |
| **Raw Materials Inventory January 1, 2015……………………….** | **$20,000** |
| **Raw Materials Inventory December, 31, 2015…………………..** | **40,000** |
| **Work in Process Inventory January 1, 2015…………………….** | **50,000** |
| **Work in Process Inventory December 31, 2015…………………** | **80,000** |
| **Finished Goods Inventory January 1, 2015**  | **120,000** |
| **Finished Goods Inventory December 31, 2015**  | **60,000** |
| **Administrative Expenses**  |  **30,000** |
| **Selling Expenses**  | **60,000** |
| **Sales**  | **600,000** |
| **Raw Materials purchases during 2015……………………………** | **150,000** |
| **Direct Labor …………………………………………………………...** | **120,000** |
| **Factory Overhead (per separate schedule)………………………** | **180,000** |
|  |  |

**Solution: Alternate Demo Problem 1**

SUPERIOR MANUFACTURING COMPANY

Manufacturing Statement

For Year Ended December 31, 2015

|  |  |  |
| --- | --- | --- |
|  |  |  |
| **Raw Materials Inventory, 1/1/15**  | **$ 20,000** |  |
| **Raw Materials Purchases**  | **150,000** |  |
| **Raw Materials Available for Use**  | **170,000** |  |
| **Less Raw Materials Inventory, 12/31/15**  |  **40,000** |  |
|  **Direct Materials**  |  |  **$130,000** |
|  **Direct Labor…………………………………………** |  | **120,000** |
|  **Factory Overhead**  |  | **180,000** |
| **Total Manufacturing Costs**  |  | **430,000** |
| **Add: Work in Process Inventory 1/1/15**  |  | **50,000** |
| **Total Work in Process Inventory**  |  | **480,000** |
| **Less: Work in Process Inventory 12/31/15**  |  | **80,000** |
|

|  |  |  |
| --- | --- | --- |
| **Cost of Goods Manufactured**  |  | **$ 400,000** |

 |  | **$ 400,000** |

SUPERIOR MANUFACTURING COMPANY

Income Statement

For Year Ended December 31, 2015

|  |  |  |
| --- | --- | --- |
| Sales  |  | **$ 600,000** |
| **Cost of Goods Sold:** |  |  |
| **Finished Goods Inventory, 1/1/15**  | **$140,000** |  |
| **Cost of Goods Manufactured**  | **400,000** |  |
| **Cost of Goods Available for Sale**  | **540,000** |  |
| **Finished Goods Inventory, 12/31/15**  |  **90,000** |  |
| **Cost of Goods Sold**  |  |  **450,000** |
| **Gross Profit**  |  | **150,000** |
| **Operating Expenses:**  |  |  |
| **Selling Expenses**  |  **30,000** |  |
| **Administrative Expenses**  |  **60,000** |  |
| **Total Operating Expense**  |  |  **90,000** |
| **Income before Taxes………………………………….** |  | **60,000** |
| **Income Tax Expense**  |  |  **15,000** |
| **Net Income after Taxes**  |  | **$ 45,000** |