

INTRODUCTION TO Managerial Accounting

Canadian Edition

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**Introduction to Managerial Accounting
First Canadian Edition**

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What makes Garrison/Noreen/Kalagnanam/Vaidyanathan

Introduction to Managerial Accounting is full of pedagogy designed to make studying productive and hassle-free. On the following pages, you will see the kind of engaging, helpful pedagogical features that make Garrison/Noreen/Kalagnanam/Vaidyanathan a favourite among both instructors and students.

Chapter Opener

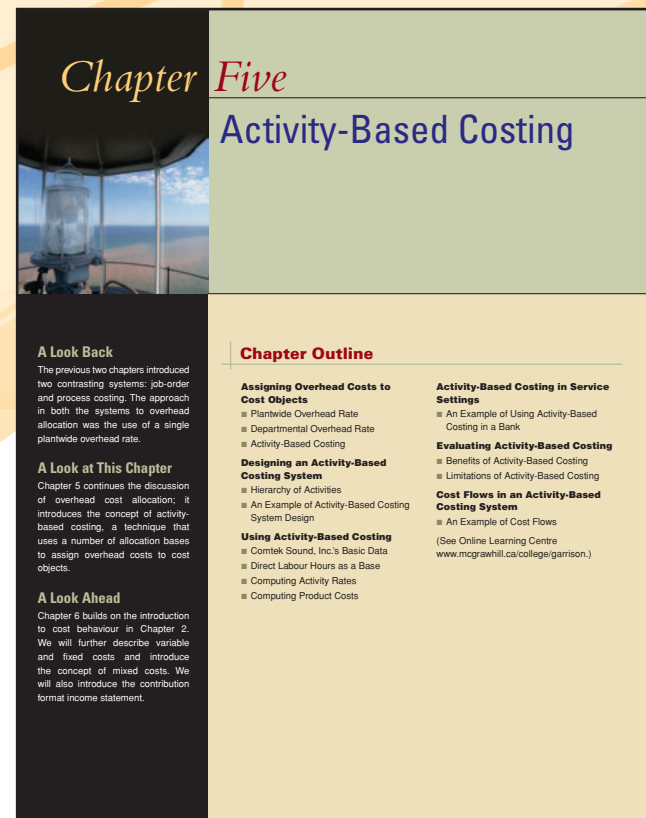
Each chapter opens with a two-page Chapter Opener featuring a real-world company.

A Look Back, A Look at This Chapter, and A Look Ahead features helping students to establish bridges between chapters, link concepts and understand how the chapters fit together.

The **Chapter Outline** provides students with a list of the topics to be covered in the chapter.

The **Decision Feature** sets the stage with a short vignette that gives the student a real-world example of how and why an organization applies the concepts and tools found in the chapter.

Learning Objectives tied directly to the summaries at the end of the chapter help students preview and review key concepts.



Managerial Accounting in Action

These highly praised vignettes depict cross-functional teams working together in real-life settings on products and services that students recognize from their own lives. Students are shown step-by-step how accounting concepts are implemented in organizations and how these concepts are applied to solve everyday business problems. First, “The Issue” is introduced through a dialogue. The student then walks through the implementation process. Finally the “Wrap-Up” summarizes the big picture.

Comtek Sound, Inc. makes two products, a radio with a built-in tape player (called a *tape unit*) and a radio with a built-in compact disc player (called a *CD unit*). Both these products are sold to automobile manufacturers for installation in new vehicles. The president of the company, Sarah Kastler, recently returned from a management conference at which activity-based costing was discussed. Following the conference, she called a meeting of the top managers in the company to discuss what she had learned. Attending the meeting were the production manager, Frank Hines; the marketing manager, Nicole Sermonne; and the accounting manager, Tom Frazier.

Sarah: I learned some things at the conference I just attended that may help resolve some long-standing puzzles here at Comtek Sound.

Nicole: Did they tell you why we've been losing all those bids lately on our bread-and-butter tape units and winning every bid on our specialty CD units?

Sarah: Nicole, you probably weren't expecting this answer, but yes, there may be a simple explanation. We may have been shooting ourselves in the foot.

Nicole: How so? I don't know about anyone else, but we have been hustling like crazy to get more business for the company.

Sarah: Nicole, when you talk with our customers, what reasons do they give for taking their tape unit business to our competitors? Is it a problem with quality or on-time delivery?

MANAGERIAL ACCOUNTING IN ACTION

The Issue

comtek
SOUND, INC.

Canadian edition, such a powerful learning tool?

ment, thereby resulting in greater efficiency and lower costs. Indeed, this is the most widely cited benefit of activity-based costing by managers.² When used in this manner, it is often called *activity-based management*. Essentially, **activity-based management (ABM)** involves focusing on activities to eliminate waste. In other words, ABM is a tool that can supplement management practices, such as total quality management and process re-engineering described in Chapter 1.

ABM in the Service Industry

in business today



Reducing the costs to serve clients is a prime objective when using ABM. *Mutual Life of Canada* decided to use ABM to improve its understanding of the costs of its shared services which provide valuable service to internal customers (departments), such as finance, corporate affairs, strategic development, and human resources. Prior to the implementation, the shared services function for the retail insurance company accounted for one-third of total non-sales-related costs. In addition, many of the internal customers questioned the cost-benefit of the shared services. *Mutual Life* went through an activity identification process and then mapped those activities to products provided; for example, mapping payroll activity to the payroll product. But more detail was required. ABM revealed where activities could be combined, eliminated, or outsourced. As a result of the ABM effort, service-level agreements were set up with internal customers, along with monthly invoices to bill back to business units for services provided.

Source: Leahy, Tad. "Beyond Traditional Product Costing." 2003. *Business Finance Magazine*. Website: <http://www.businessfinancemag.com/articles>. Reprinted with permission from *Controller Magazine*.

The first step in any improvement program is to decide what to improve. The theory of constraints (TOC) approach discussed in Chapter 1 is a powerful tool for targeting the area in an organization whose improvement will yield the greatest benefit. An ABC system, for example, *Comtek's* managers may wonder how to assess a purchase order (see Exhibit 5-4). Such a question on **benchmarking** their costs against the costs of outstanding performance. Once the activity is targeted, use the ABM approach to study the activity in order to eliminate the wasteful consumption of resources. If no value is added, any value are targeted for elimination. However, ensure that eliminating a certain activity does not neg-

In Business Today

These helpful boxed features offer a glimpse into how real companies use the managerial accounting concepts discussed within the chapter. Every chapter contains two to nine of these current examples.



DECISION FEATURE e-Cycling to Profitability

MAXUS Technology Inc. offers a one-stop-shop asset recovery and e-waste recycling solution for end-of-life electronic equipment, with special expertise in telecommunications. Increased technology use and new laws governing disposal are realities that all citizens and companies will soon face. E-waste disposal has the potential to bring financial liability to a company if not handled properly and can seriously damage carefully cultivated reputations, market shares, and sales.

This is because e-waste is the fastest growing waste stream in North America, and obviously, these products do not biodegrade—a problem in and of itself. In addition, e-waste can also contain hazardous goods. A computer monitor, for example, contains up to eight pounds of lead. Increasing product obsolescence only aggravates the situation.

Shelley Whitmore of Calgary founded *MAXUS* in 1994, which has been in operation ever since. Initially an asset recovery company (buying and selling old assets), *MAXUS* has, in recent years, moved into total technology solutions in response to a growing problem—what to do with equipment that cannot be resold. *MAXUS* has found that clients using its services can generate new revenue through selling their old equipment in markets around the world and thus obtain peace of mind through recycling. Essentially, *MAXUS* will squeeze as much value as possible from client equipment while ensuring the rest is recycled properly.

Needless to say, e-cycling poses its own environmental challenges which *MAXUS* has decided to face head on. It designed a unique recycling system that ensures that no harmful components from anything it processes are landfills and no harmful waste is shipped overseas for disposal. From the beginning, *MAXUS* has followed leading-edge environmental practices and is moving toward ISO 14001 certification.

Clayton Miller, *MAXUS's* Communications Coordinator, says that finding a way to make e-waste recycling profitable is a trial-and-error process that involves many sleepless nights. For one, the equipment required does not come cheap, and most of it must be designed from the ground up. Second, transportation of e-waste is prohibitive because weights are often high. Other issues include the wide range of possible products—literally every electronic device under the sun—and differing expectations and needs of clients. Activity-based costing is the only way *MAXUS* runs a successful business.

The time to perform every business activity, from dismantling to packing to preparing proposals, has been measured to figure out the true cost. This allows *MAXUS* to adjust its rates on a client-by-client basis in order to ensure break-even pricing. Without careful attention to overhead, *MAXUS* could find itself in a situation where growth in market share actually costs money.

Learning Objectives

After studying Chapter 5, you should be able to:

LO1 Understand the basic approach in activity-based costing and how it differs from traditional costing.

LO2 Compute product costs using activity-based costing and compare them with costs under a traditional costing system.

LO3 Describe the use of activity-based costing in service settings.

LO4 Understand the benefits and limitations of activity-based costing systems.

LO5 Record the flow of costs in an activity-based costing system.

that reports, if the product costs are to be used by the modifications should be made. For example, for distinction between manufacturing costs on the one hand and general administrative expenses on the other hand is unimportant. Manufacturing causes, and it does not matter whether the costs are general administrative expenses. Consequently, for manufacturing and general administrative expenses should be assigned to products. Moreover, as mentioned above, facility-level costs should be removed from product costs when making decisions. Nevertheless, the techniques covered in this chapter provide a good basis for understanding the mechanics of activity-based costing. For a more complete coverage of the use of activity-based costing in decisions, see more advanced texts.

City Controller

decision maker

You are the controller of your city office. The managers responsible for utilities and property taxes have complained to you regarding the charges from support services departments, such as information systems and maintenance. The city recently decided to "charge" the internal users of support services an "appropriate" amount to reflect the cost of these services. After meeting with the cost analyst for the city, you discover that the city uses a single "citywide" rate to allocate overhead costs. You are puzzled because you know that the support services departments are quite different from one another and that it does not make sense to combine the overhead costs into one single pool. How do you proceed to resolve the issue?

Cost Flows in an Activity-Based Costing System

In Chapter 3, we discussed the flow of costs in a job-order costing system. The flow of costs through Raw Materials, Work in Process, and other accounts is the same under activity-based costing. The only difference in activity-based costing is that more than one predetermined overhead rate is used to apply overhead costs to products. Our purpose in this section is to provide a detailed example of cost flows in an activity-based costing system.

Learning Objective 5
Record the flow of costs in an activity-based costing system.

Service



Owing to the growing number of service-based companies in business today, the Canadian edition uses a helpful icon to distinguish service-related examples.

The Decision Maker

feature fosters critical thinking and decision-making skills by providing real-world business scenarios that require the resolution of a business issue. The suggested solution is located at the end of the chapter.

What makes Garrison/Noreen/Kalagnanam/Vaidyanathan,

Ethics assignments

serve as a reminder that good conduct is essential in business. Group projects can be assigned either as homework or as in-class discussion projects.



COMMUNICATING IN PRACTICE (LO1, LO2)

You often provide advice to Maria Graham, a client who is interested in diversifying her company. Maria is considering the purchase of a small manufacturing concern that assembles and packages its many products by hand. She plans to automate the factory and her projections indicate that the company will once again be profitable within two to three years. During her review of the company's records, she discovered that the company currently uses direct labour-hours to allocate overhead to its products. Because of its simplicity, Maria hopes that this approach can continue to be used.

Required:

Write a memorandum to Maria that addresses whether or not direct labour should continue to be used as an allocation base for overhead.



ETHICS CHALLENGE (LO1, LO3)

You and your friends go to a restaurant as a group. At the end of the meal, the issue arises of how the bill for the group should be shared. One alternative is to figure out the cost of what each individual consumed and divide up the bill accordingly. Another alternative is to split the bill equally among the individuals.

Required:

Which system for dividing the bill is more equitable? Which system is easier to use? How does this issue relate to the material covered in this chapter?



TEAMWORK IN ACTION (LO1)

This activity requires teamwork to reinforce the understanding of the hierarchy of activities commonly found in activity-based costing systems in manufacturing companies.

Required:

1. The team should discuss and then write up a brief description of how the activity-based costing allocates overhead to products. All team members should agree with and understand the description.



ing dishes, depend on the number of diners served. Data concerning these activities are displayed below.

	A	B	C	D	E	F	G	H
1		Serving a Party	Serving a Diner	Serving Drinks				Total
2	Total cost	\$33,000		\$138,000		\$24,000		\$195,000
3	Total activity	6,000	parties	15,000	diners	10,000	drinks	
4								

Spreadsheets have become an increasingly common tool for managerial accountants; therefore, selected exhibits and data appear as Microsoft Excel® screen captures.

This author team has always been known for its quality and quantity of assignment material. *Introduction to Managerial Accounting* has a wide variety of end-of-chapter materials to assist students, including:

Questions that students can use to ensure that they have mastered concepts.

Brief Exercises that cover a single learning objective each, and **Exercises** that cover multiple learning objectives.

Problems that challenge students to apply themselves.

a **Building Your Skills** section containing problem material that helps students develop communication, teamwork, Internet, and analytical skills.

Questions

- What are the three common approaches for assigning overhead costs to products?
- Why is activity-based costing growing in popularity?
- Why do departmental overhead rates sometimes result in inaccurate product costs?
- What are the four hierarchical levels of activity discussed in the chapter?
- Why is activity-based costing described as a "two-stage" costing method?
- Why do overhead costs often shift from high-volume products to low-volume products when a company switches from a traditional costing method to activity-based costing?

Brief Exercises

BRIEF EXERCISE 5-1 ABC Cost Hierarchy (LO1)

The following activities occur at Greenwich Corporation, a company that manufactures a variety of products.

- Receive raw materials from suppliers.
- Manage parts inventories.
- Do rough milling work on products.
- Interview and process new employees in the human resources department.
- Design new products.

Exercises

EXERCISE 5-1 ABC Cost Hierarchy (LO1)

The following activities are carried out in Greenberry Company, a manufacturer of consumer goods.

- Direct labour workers assemble a product.
- Engineers design a new product.
- A machine is set up to process a batch.
- Numerically controlled machines cut and shape materials.
- The HR department trains new employees concerning company policies.
- Raw materials are moved from the receiving dock to the production line.

Problems

PROBLEM 5-1 ABC Cost Hierarchy (LO1)

Juneau Company manufactures a variety of products in a single facility. Consultants hired by the company to do an activity-based costing analysis have identified the following activities carried out in the company on a routine basis:

- Machines are set up between batches of different products.
- The company's grounds crew maintains planted areas surrounding the factory.
- A percentage of all completed goods are inspected on a random basis.
- Milling machines are used to make components for products.

Building Your Skills

CHECK FIGURE
(2) Standard model unit product cost: \$29.98 per unit



ANALYTICAL THINKING* (LO2)

"A dollar of gross margin per briefcase? That's ridiculous!" roared Art Dejans, president of CarryAll, Inc. "Why do we go on producing those standard briefcases when we're able to make over \$15 per unit on our specialty items? Maybe it's time to get out of the standard line and focus the whole plant on specialty work."

Mr. Dejans is referring to a summary of unit costs and revenues that he had just received from the company's Accounting Department:

	Standard Briefcases	Specialty Briefcases
Selling price per unit	\$36	\$40
Unit product cost	35	25
Gross margin per unit	\$ 1	\$15

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We will also work with you at your own institution to customize workshops that best suit the needs of your faculty. These include our Teaching Excellence and Accounting Innovation symposium series.

Research Reports into Mobile Learning and Student Success

These landmark reports, undertaken in conjunction with academic and private-sector advisory boards, are the result of research studies into the challenges professors face in helping students succeed and the opportunities that new technology presents to impact teaching and learning.



What's the best way for my students to brush up on their Accounting skills?

ONLINE LEARNING CENTRE (OLC)

More and more students are studying online. That is why we offer an Online Learning Centre (OLC) that follows *Introduction to Managerial Accounting* chapter by chapter. It does not require any building or maintenance on your part. It is ready to go the moment you and your students type in the URL:

www.mcgrawhill.ca/college/garrison.

As your students study, they can access to the OLC for such benefits as:

- Self-grading quizzes
- Internet exercises
- Alternate problems
- Chapter outlines
- Practice exams
- Excel spreadsheets
- Links to URLs referenced in the text

A secured Instructor Resource Centre stores your essential course materials to save you prep time before class. The Instructor's Manual, Solutions, and Microsoft PowerPoint® presentations are now just a couple of clicks away.

The OLC also serves as a doorway to other technology solutions such as PageOut, which is free to textbook adopters.

GradeSummit tells your students what they need to know in order to study effectively. And it provides you, the instructor, with valuable insight into which of your students are struggling and which course topics give them the most trouble.

GradeSummit provides a series of practice tests that can be taken in various formats according to student preference: **practice mode**, for instance, displays the correct answer immediately, while **exam mode** simulates a real classroom exam and displays results at the end. There is even a smart testing engine, **SummitExpress**, that automatically scales the difficulty level of the questions according to the student's responses.



Once a student has taken a particular test, GradeSummit returns a detailed results page showing exactly where the student did well and where he or she needs to improve. Students can compare their results with those of their other classmates or even with those of every other student using the text nationwide. With that information, students can plan their studying to focus exclusively on their weak areas, without wasting effort on material they have already mastered. And they can come back to take a retest on those subjects later, comparing their new score with their previous efforts.

As an instructor, you will know which students are falling behind, simply by consulting GradeSummit's test logs, where results for every student in your course are available for review. Because GradeSummit's results are so detailed, you will know exactly what topics are causing difficulties—an invaluable aid when it comes to planning lectures and homework.

Supplements

INSTRUCTOR SUPPLEMENTS

Instructor CD-ROM

Allowing instructors to create a customized multimedia presentation, this all-in-one resource incorporates the Test Bank, PowerPoint® Slides, Instructor's Resource Guide, Solutions Manual, Teaching Transparency Masters, links to PageOut, and the Spreadsheet Application Template Software (SPATS). Selected supplements are available for download from the text's Online Learning Centre at www.mcgrawhill.ca/college/garrison.

Check Figures

These provide key answers for selected problems and cases. They are available on the text's website.

Solutions Manual

This supplement contains completely worked-out solutions to all assignment material and a general discussion of the use of group exercises. In addition, the manual contains suggested course outlines and a listing of exercises, problems, and cases scaled according to difficulty.

Teaching Transparencies

Contains a comprehensive set of over 260 teaching transparencies covering every chapter that can be used for classroom lectures and discussion.

PowerPoint® Slides

These slides offer a great visual complement for your lectures. A complete set of slides covers each chapter. They are only available on the Instructor CD-ROM and the text's website.

Test Bank

Nearly 2,000 questions are organized by chapter and include true/false, multiple-choice, and essay questions and computational problems.

Diploma Computerized Test Bank

This test bank is delivered in the Diploma Shell, new from Brownstone. Use it to make different versions of the same test, change the answer order, edit and add questions, and conduct online testing. Technical support for this software is available.

Excel Templates

Prepared by Jack Terry of ComSource Associates, Inc., these Excel templates offer solutions to the Student SPATS version. They are available on the Instructor CD and the text's website.

STUDENT SUPPLEMENTS

Excel Templates

This spreadsheet-based software uses Excel to solve selected problems and cases in the text. These selected problems and cases are identified in the margin of the text with an appropriate icon. The Excel templates are available on the text's website at www.mcgrawhill.ca/college/garrison, along with the OLC resources described on page viii.

Workbook/Study Guide

This study aid provides suggestions for studying chapter material, summarizes essential points in each chapter, and tests students' knowledge using self-test questions and exercises.

Reviewers

The efforts of many people are needed to develop and improve a text. Among these people are the reviewers and consultants who point out areas of concern, cite areas of strength, and make recommendations for change. In this regard, the following professors provided feedback that was enormously helpful in preparing the Canadian edition of *Introduction to Managerial Accounting*:

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