

# Pointing Students in the Right Direction

## “Why do I need to learn Managerial Accounting?”

Brewer's *Introduction to Managerial Accounting* has earned a reputation as the most concise and readable book on the market. Its manageable chapters and clear presentation point students toward understanding just as the needle of a compass provides direction to travelers.

However, the book's authors also understand that everyone's destinations are different. Some students will become accountants, while others are destined for careers in management, marketing, or finance. Not only does the Brewer text teach students managerial accounting concepts in a clear and concise way, but it also asks students to consider how the concepts they're learning will apply to the real world situations they will eventually confront in their careers. This combination of conceptual understanding and the ability to apply that knowledge directs students toward success, whatever their final destination happens to be.

### Here's how your colleagues have described Brewer's *Introduction to Managerial Accounting*:

**Better than other texts**, Brewer is written in a manner that fosters a more mature level of thinking in the student. When the “whys” and the usefulness of concepts are presented so well, it makes my job so much easier.

—M. David Gorton, Eastern Washington University

...This book is **so well written** that it is easy for the students to read the text and then be able to work exercises and problems at the end of the chapter. The topics covered do **a great job of preparing business students** for their upper level business courses and it lays a strong foundation for the accounting majors who will take cost accounting. This book has so many resources for students to go along with the text that you can individually fit the needs of almost any student. **I would highly recommend this book** for any managerial accounting principle class.

—Joseph M. Hagan, East Carolina University

This textbook presents fundamental managerial accounting concepts in **a very clear and concise manner** and offers many effective mechanisms (e.g., end-of-chapter problems and cases; on-line quizzes, videos, and slideshows) that help students reinforce the concepts.

—Nace Magner, Western Kentucky University

**It is an excellent book.** Clearly written and comprehensive. Students are able to understand the material.

—Anwar Y. Salimi, California State Polytechnic University-Pomona

*Introduction to Managerial Accounting*, 5th edition, by **BREWER/GARRISON/NOREEN** empowers your students by offering:

## CONCISE COVERAGE

Your students want a text that is concise and that presents material in a clear and readable manner. *Introduction to Managerial Accounting* keeps the material accessible while avoiding advanced topics related to cost accounting. Students' biggest concern is whether they can solve the end-of-chapter problems after reading the chapter. Market research indicates that Brewer/Garrison/Noreen helps students apply what they've learned better than any other managerial accounting text on the market. Additionally, the key supplements are written by the authors ensuring that students and instructors will work with clear, well-written supplements that employ consistent terminology.

## DECISION-MAKING FOCUS

All students who pass through your class need to know how accounting information is used to make business decisions, especially if they plan to be future managers. That's why Brewer, Garrison and Noreen make decision making a pivotal component of *Introduction to Managerial Accounting*. In every chapter you'll find the following key features that are designed to teach your students how to use accounting information. **Decision Maker** and **You Decide Boxes** help students to develop analytical, critical thinking, and problem-solving skills. **Building Your Skills** cases challenge students' decision-making skills.

## A CONTEMPORARY APPROACH TO LEARNING

Today's students rely on technology more than ever as a learning tool, and *Introduction to Managerial Accounting* offers the finest technology package of any text on the market. From study aids to online grading and course management, our technology assets have one thing in common: they make your class time more productive, more stimulating, and more rewarding for you and your students. McGraw-Hill's *Connect Accounting* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success. *Connect Plus™* provides an online version of the text in addition to access to *Connect*, giving students a convenient way to access everything they need to succeed in their course. The Online Learning Center provides your students with a variety of multimedia aids to help them learn managerial accounting. McGraw-Hill's *Media Integration* allows students to maximize the technological package available to them with Brewer. Apple® iPod® icons throughout the text link content back to quizzes, audio and visual lecture presentations, and course-related videos—all of which can be downloaded to their iPod or other portable MP3/MP4 players so they can study and review on the go.



# BREWER / GARRISON / NOREEN'S

**Introduction to Managerial Accounting** is full of pedagogy designed to make studying productive and hassle-free. On the following pages, you'll see the kind of engaging, helpful pedagogical features that have made Brewer one of the best-selling Managerial Accounting texts on the market.

## CHAPTER OUTLINE

Each chapter opens with an **outline** that provides direction to the student about the road they can expect to traverse throughout the chapter. The **A Look** feature reminds students what they have learned in previous chapters, what they can expect to learn in the current chapter, and how the topics will build on each other in chapters to come.

## DECISION FEATURE

The **Decision Feature** at the beginning of each chapter provides a real-world example for students, allowing them to see how the chapter's information and insights apply to the world outside the classroom. **Learning Objectives** alert students to what they should expect as they progress through the chapter.

**2 Systems Design: Job-Order Costing**

**<< A LOOK BACK**  
Chapter 1 described the three major activities of managers and compared and contrasted financial and managerial accounting. It also defined many of the terms that are used to classify costs in business. We will use many of these terms in Chapter 2. Now would be a good time to check your understanding of those terms by referring to the glossary at the end of Chapter 1.

**A LOOK AT THIS CHAPTER**  
Chapter 2 distinguishes between two costing systems, job-order and process costing, and then provides an in-depth look at a job-order costing system. We describe how direct material and direct labor costs are accumulated on jobs. Then we address manufacturing overhead, an indirect cost that must be allocated (or applied) to jobs. Finally, we take a more detailed look at the flow of costs through a company's accounting system using journal entries.

**A LOOK AHEAD >>**  
Chapter 3 continues the discussion of the allocation of manufacturing overhead costs, showing how these costs can be more accurately assigned using activity-based costing. We cover process costing in Chapter 4.

**CHAPTER OUTLINE**

- **Process and Job-Order Costing**
  - Process Costing
  - Job-Order Costing
- **Job-Order Costing—An Overview**
  - Measuring Direct Materials Cost
  - Job Cost Sheet
  - Measuring Direct Labor Cost
  - Applying Manufacturing Overhead
  - Using the Predetermined Overhead Rate
  - The Need for a Predetermined Rate
  - Choice of an Allocation Base for Overhead Cost
  - Computation of Unit Costs
  - Summary of Document Flows
- **Job-Order Costing—The Flow of Costs**
  - The Purchase and Issue of Materials
  - Labor Cost
  - Manufacturing Overhead Costs
  - Applying Manufacturing Overhead
  - Nonmanufacturing Costs
  - Cost of Goods Manufactured
  - Cost of Goods Sold
  - Summary of Cost Flows
- **Problems of Overhead Application**
  - Underapplied and Overapplied Overhead
  - Disposition of Underapplied or Overapplied Overhead Balances
  - A General Model of Product Cost Flows
  - Multiple Predetermined Overhead Rates
- **Job-Order Costing in Service Companies**

**LEARNING OBJECTIVES**

After studying Chapter 10, you should be able to:

- **LO1** Prepare a segmented income statement using the contribution format, and explain the difference between traceable fixed costs and common fixed costs.
- **LO2** Compute return on investments (ROI) and show how changes in sales, expenses, and assets affect ROI.
- **LO3** Compute residual income and understand its strengths and weaknesses.
- **LO4** Understand how to construct and use a balanced scorecard.

**DECISION FEATURE**

**Sony Attempts to Rebound**

Last century Sony delighted customers with its Walkman, the Trinitron TV, the PlayStation, and the CD. However, in the digital media era Sony has lost ground to many better-managed competitors such as Microsoft, Apple, Sharp, and Nokia. Sony is attempting to rebound by discontinuing unprofitable segments such as Alibo, a line of robotic pets; Qualia, a line of boutique electronics; 1,220 cosmetic salons; and 18 Maxim de Paris restaurants. In addition, the company has closed nine plants, sold \$705 million worth of assets, and eliminated 5,700 jobs.

The next step for Sony is to improve communications across its remaining business units. For example, at one point Sony had three business units unknowingly competing against one another by developing their own digital music players. Sony's challenge is to encourage decentralized decision making to spur product innovation, while centralizing control of communications across the company so that engineers do not create competing or incompatible products.

Source: Marc Gunther, "The Walkman, the Walkman, and the Salarimex," *Fortune*, June 12, 2006, pp. 70-83.

*Each section of the chapter's outline has an introduction about the business aspect of the topic and gets the reader engaged before the topic is covered.*

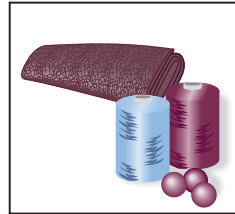
— Kathy Crusto-Way, Tarrant County College

# POWERFUL PEDAGOGY

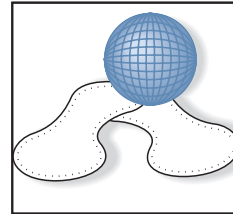
## INFOGRAPHICS

Infographics and exhibits help students visualize key accounting concepts, such as Static versus Flexible Budgets, the Activity-Based Costing Model, and Management by Exception.

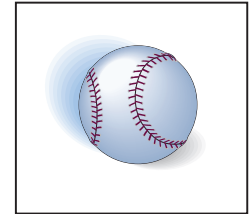
### Manufacturing Companies: Classifications of Inventory



Raw Materials



Work in Process



Finished Goods

*These real world business situations are extremely helpful. These **help students see the application of managerial accounting to real business operations.** It also helps students to see that since the world is constantly changing, that the applications employed must be adapted in response to the changing environment.*

—Agatha E. Jeffers, Montclair State University

## IN BUSINESS BOXES

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

### IN BUSINESS

#### Skyrocketing Transportation Costs Affect Direct Materials Standards



Direct materials price standards should reflect the final delivered cost of the materials. Given increases in the costs of shipping raw materials across oceans, many companies have increased their price standards. For example, the average cost to rent a ship to transport raw materials from Brazil to China has increased from \$65,000 to \$180,000. In some instances, shipping costs now exceed the cost of the cargo itself. It costs about \$88 to ship a ton of iron ore from Brazil to Asia; however, the iron ore itself only costs \$60 per ton.

Source: Robert Guy Matthews, "Ship Shortage Pushes Up Prices of Raw Materials," *The Wall Street Journal*, October 22, 2007, p. A1 and A12.

1. The standard and actual prices per pound of raw material are \$4.00 and \$4.50, respectively. A total of 10,500 pounds of raw material was purchased and then used to produce 5,000 units. The quantity standard allows two pounds of the raw material per unit produced. What is the materials quantity variance?
  - a. \$5,000 unfavorable
  - b. \$5,000 favorable
  - c. \$2,000 favorable
  - d. \$2,000 unfavorable
2. Referring to the facts in question 1 above, what is the material price variance?
  - a. \$5,250 favorable
  - b. \$5,250 unfavorable
  - c. \$5,000 unfavorable
  - d. \$5,000 favorable



## CONCEPT CHECK

Concept Checks allow students to test their comprehension of topics and concepts covered at various stages throughout each chapter.

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.

**Rick:** I think I understand, but it is confusing.

**Victoria:** Just remember that a cost is called variable if it is proportional to activity; it is called fixed if it does not depend on the level of activity. However, fixed costs can change for reasons unrelated to changes in the level of activity. And controllability has little to do with whether a cost is variable or fixed. Fixed costs are often more controllable than variable costs.

### DECISION MAKER

### General Manager of a Luxury Resort

You are the general manager of a 200-room luxury resort in Arizona and are responsible for all aspects of operations. The budget for the current month called for total revenue from room rentals of \$2,362,500 based on 5,625 room-days. (A room-day is a room rented for one day.) The actual revenue from room rentals for the month amounted to \$2,502,800 for 6,250 room-days. Using the flexible budget approach, analyze these results.

### Performance Reports in Nonprofit Organizations

The performance reports in nonprofit organizations are basically the same as the performance reports we have considered so far—with one prominent difference. Nonprofit organizations usually receive a significant amount of funding from sources other than sales. For example, universities receive their funding from sales (i.e., tuition charged to students), from endowment income and donations, and—in the case of public universities—from state appropriations. This means that, like costs, the revenue in governmental and nonprofit organizations may consist of both fixed and variable elements.

#### Rick's Hairstyling Revenue and Spending Variances For the Month Ended March 31

	Flexible Budget	Actual Results	Revenue and Spending Variances
Client-visits.....	1,100	1,100	
Revenue (\$180.00q).....	<u>\$198,000</u>	<u>\$194,200</u>	<u>\$3,800 U</u>
Expenses:			
Wages and salaries (\$65,000 + \$37.00q)	105,700	106,900	1,200 U
Hairstyling supplies (\$1.50q).....	1,650	1,620	30 F
Client gratuities (\$4.10q).....	4,510	6,870	2,360 U
Electricity (\$1,500 + \$0.10q).....	<u>1,610</u>	<u>1,550</u>	<u>60 F</u>
Rent (\$28,500).....	28,500	28,500	0
Liability insurance (\$2,800).....	2,800	2,800	0
Employee health insurance (\$21,300).....	21,300	22,600	1,300 U
Miscellaneous (\$1,200 + \$0.20q).....	<u>1,420</u>	<u>2,130</u>	<u>710 U</u>
Total expense.....	<u>167,490</u>	<u>172,970</u>	<u>5,480 U</u>
Net operating income.....	<u>\$ 30,510</u>	<u>\$ 21,230</u>	<u>\$9,280 U</u>

#### EXHIBIT 8-6

Revenue and Spending Variances from Comparing the Flexible Budget to the Actual Results

between how much a cost should have been, given the actual level of activity, and the actual amount of the cost. If the actual cost is greater than what the cost should have been, the variance is labeled as unfavorable. If the actual cost is less than what the cost should have been, the variance is labeled as favorable. Why would a cost have a favorable or unfavorable variance? There are many possible explanations including paying a higher price for inputs than should have been paid, using too many inputs for the actual level of activity, a change in technology, and so on. In the next chapter we will delve into this topic in greater detail.

Note from Exhibit 8-6 that the overall net operating income variance is **\$9,280 U** (unfavorable). This means that given the actual level of activity for the period, the net operating income was \$9,280 lower than it should have been. There are a number of reasons for this. The most prominent is the unfavorable revenue variance of \$3,800. Next in line is the \$2,360 unfavorable variance for client gratuities. Looking at this in another way, client gratuities were more than 50% larger than they should have been according to the flexible budget. This is a variance that Rick would almost certainly want to investigate further. Rick may directly control the client gratuities himself. If not, he may want to know who authorized the additional expenditures. Why were they so large? Was more given away than usual? If so, why? Were more expensive gratuities given to clients? If so, why? Note that this unfavorable variance is not necessarily a bad thing. It is possible, for example, that more lavish use of gratuities led to the 10% increase in client-visits.

The **YOU DECIDE** feature challenges students to apply the tools of analysis and make decisions. The suggested solution is found at the end of the chapter.

### Owner of Micro-Brewery

### YOU DECIDE

Hops is an essential ingredient in beer. The brewery's budget for the current month, which was based on the production of 800 barrels of beer, allowed for an expense of \$960 for hops. The actual production for the month was 850 barrels of beer and the actual cost of the hops used to produce that beer was \$1,020. Hops is a variable cost. Do you think the expense for hops for the month was too high?



## UTILIZING THE ICONS



To reflect our service-based economy, the text is replete with examples from service-based businesses. A helpful icon distinguishes service-related examples in the text.



Ethics assignments and examples serve as a reminder that good conduct is vital in business. Icons call out content that relates to ethical behavior for students.



Media integrated icons throughout the text link content back to chapter-specific quizzes, audio lectures, and visual presentations; all of which can be downloaded to an MP3 player. This gives students access to a portable, electronic learning option to support their classroom instruction.



The writing icon denotes problems that require students to use critical thinking as well as writing skills to explain their decisions.



An Excel<sup>®</sup> icon alerts students that spreadsheet templates are available for use with select problems and cases.



The IFRS icon highlights content that may be affected by the impending change to IFRS and possible convergence between U.S. GAAP and IFRS.

## END-OF-CHAPTER MATERIAL

*Introduction to Managerial Accounting* has earned a reputation for the best end-of-chapter review and discussion material of any text on the market. Our problem and case material conforms to AICPA, AACSB, and Bloom's Taxonomy categories and makes a great starting point for class discussions and group projects. With discussion questions, brief exercises, exercises, problems, cases, and research and application problems, Brewer offers students practice material of varying complexity and depth. In order to provide even more practice opportunities, an **alternate problem set** is available on the text's website along with online quizzes and practice exams.

## AUTHOR-WRITTEN SUPPLEMENTS

Unlike other managerial accounting texts, Brewer, Garrison, and Noreen write all of the text's major supplements, ensuring a perfect fit between text and supplements. For more information on *Introduction to Managerial Accounting's* supplements package see pages xiv–xviii.

*A great text with numerous real world examples to help apply material to the decision making process. Students will find it easy to read and to follow in working end of chapter assignments. Provides the instructor with the tools to help increase classroom discussion on chapter topics with real world applications.*

—Terry G. Elliott, Morehead State University

# New to the 5th edition

An **excellent book** for an  
*Introductory Managerial Course*  
**for all business students, not**  
*just Accounting majors.*

—Tamara Phelan, Northern Illinois  
University

*This is a great text and I*  
**strongly recommend it** to  
*first time students in the area of*  
*managerial accounting.*

—Luther L. Ross, Central Piedmont  
Community College

Faculty feedback helps us continue to improve *Introduction to Managerial Accounting*. In response to reviewer suggestions we have:

- Reordered variances in Chapters 8 and 9. Both chapters have been extensively rewritten to follow a more logical flow.
- Added coverage of Corporate Social Responsibility to Chapter 2 to introduce students to an important and relevant topic in today's business world; moved the coverage of balanced scorecard to Chapter 10 where it more naturally belongs.
- Added International Financial Reporting Standards (IFRS) icons throughout the text to highlight topics that may be affected should the U.S. adopt IFRS in the future.

## **Specific changes were made in the following chapters:**

- In Business boxes updated throughout.
- All end-of-chapter items tagged to Bloom's Taxonomy categories as well as AACSB and AICPA standards.

## **Prologue**

- Materials dealing with the distinction between financial and managerial accounting have been moved to Chapter 2.
- The section on Technology in Business has been eliminated.
- New material on Corporate Social Responsibility has been added.

## Chapter 1

- The Schedule of Cost of Goods Manufactured has been simplified by eliminating the list of the elements of Manufacturing Overhead. This removes a discrepancy that had existed between the coverage of the Schedule of Cost of Goods Manufactured in Chapter 1 and in Chapter 2.

## Chapter 2

- Portions of the chapter have been rewritten to enhance clarity.

## Chapter 4

- Preparing the Cost Reconciliation Report is now a Learning Objective.

## Chapter 5

- All of the end-of-chapter materials for the Variable Costing appendix have been moved to the end of the appendix to make the appendix more self-contained.

## Chapter 6

- The basic equations used in target profit analysis and break-even analysis have been revised to be more intuitive.
- Break-even analysis has been moved to follow target profit analysis because break-even analysis is just a special case of target profit analysis.
- Profit graphs are covered in addition to CVP graphs.

## Chapter 8

- This chapter has been completely rewritten to follow a logical path leading from budgeting to performance evaluation comparing budgets to actual results and then on to standard cost analysis. Flexible budgets are used to prepare performance reports with activity variances and revenue and spending variances. This chapter contains some of the material that used to be in Chapter 9.

## Chapter 9

- This chapter now covers all standard cost variances—including fixed manufacturing overhead variances in an appendix. The material in this chapter has been extensively rewritten—particularly the materials dealing with manufacturing overhead. This chapter contains material that used to be in Chapter 8.

## Chapter 10

- The materials dealing with the Balanced Scorecard have been expanded and have been moved to this chapter, where they more naturally belong.
- The Segmented Income Statement is covered in much more depth.

## Chapter 13

- Free cash flow has been added to the chapter.
- The exercises and problems for the appendix have been moved so that they follow the appendix.

# A Market-Leading Book Deserves Market-Leading Technology

**McGraw-Hill**  
**CONNECT™ ACCOUNTING**

**connect™**  
**ACCOUNTING**

## Less Managing. More Teaching. Greater Learning.

McGraw-Hill *Connect Accounting* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success.

McGraw-Hill *Connect Accounting* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge.

## McGraw-Hill Connect Accounting features

*Connect Accounting* offers a number of powerful tools and features to make managing assignments easier, so faculty can spend more time teaching. With *Connect Accounting*, students can engage with their coursework anytime and anywhere, making the learning process more accessible and efficient. *Connect Accounting* offers you the features described below.

### Simple assignment management

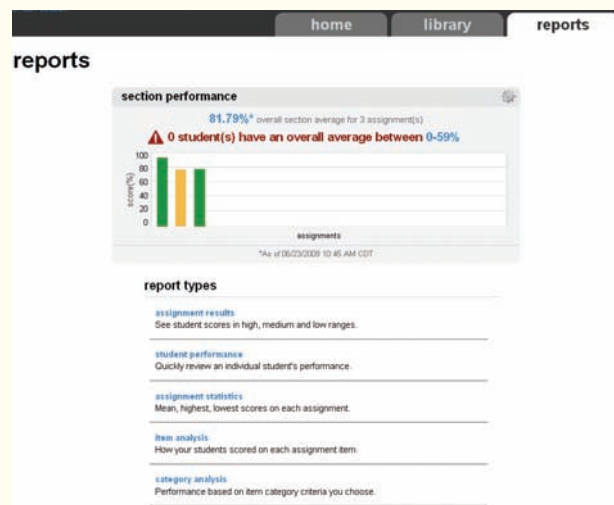
With *Connect Accounting*, creating assignments is easier than ever, so you can spend more time teaching and less time managing. The assignment management function enables you to:

- Create and deliver assignments easily with selectable end-of-chapter questions and test bank items.
- Streamline lesson planning, student progress reporting, and assignment grading to make classroom management more efficient than ever.
- Go paperless with the eBook and online submission and grading of student assignments.

### Smart grading

When it comes to studying, time is precious. *Connect Accounting* helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. When it comes to teaching, your time also is precious. The grading function enables you to:

- Have assignments scored automatically, giving students immediate feedback on their work and side-by-side comparisons with correct answers.
- Access and review each response; manually change grades or leave comments for students to review.
- Reinforce classroom concepts with practice tests and instant quizzes.



### Instructor library

The *Connect Accounting* Instructor Library is your repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. The *Connect Accounting* Instructor Library includes:

- PowerPoints
- Transparency Masters
- Bonus Variable Costing chapter
- FIFO Supplement chapter



### Student study center

The *Connect Accounting* Student Study Center is the place for students to access additional resources. The Student Study Center:

- Offers students quick access to lectures, practice materials, eBooks, and more.
- Provides instant practice material and study questions, easily accessible on the go.
- Gives students access to the Personalized Learning Plan described next.

### Personalized Learning Plan

The Personalized Learning Plan (PLP) connects each student to the learning resources needed for success in the course. For each chapter, students:

- Take a practice test to initiate the Personalized Learning Plan.
- Immediately upon completing the practice test, see how their performance compares to chapter learning objectives or content by sections within chapters.
- Receive a Personalized Learning Plan that recommends specific readings from the text, supplemental study material, and practice work that will improve their understanding and mastery of each learning objective.

### Diagnostic and adaptive learning of concepts: LearnSmart

Students want to make the best use of their study time. The LearnSmart adaptive self-study technology within *Connect Accounting* provides students with a seamless combination of practice, assessment, and remediation for every concept in the textbook. LearnSmart's intelligent software adapts to every student response and automatically delivers concepts that advance the student's understanding while reducing time devoted to the concepts already mastered. The result for every student is the fastest path to mastery of the chapter concepts. LearnSmart:

- Applies an intelligent concept engine to identify the relationships between concepts and to serve new concepts to each student only when he or she is ready.
- Adapts automatically to each student, so students spend less time on the topics they understand and practice more those they have yet to master.
- Provides continual reinforcement and remediation, but gives only as much guidance as students need.
- Integrates diagnostics as part of the learning experience.
- Enables you to assess which concepts students have efficiently learned on their own, thus freeing class time for more applications and discussion.

### Student progress tracking

*Connect Accounting* keeps instructors informed about how each student, section, and class is performing, allowing for more productive use of lecture and office hours. The progress-tracking function enables you to:

- View scored work immediately and track individual or group performance with assignment and grade reports.
- Access an instant view of student or class performance relative to learning objectives.
- Collect data and generate reports required by many accreditation organizations, such as AACSB and AICPA.

### McGraw-Hill Connect Plus Accounting

McGraw-Hill reinvents the textbook learning experience for the modern student with *Connect Plus Accounting*. A seamless integration of an eBook and *Connect Accounting*, *Connect Plus Accounting* provides all of the *Connect Accounting* features plus the following:

- An integrated eBook, allowing for anytime, anywhere access to the textbook.
- Dynamic links between the problems or questions you assign to your students and the location in the eBook where that problem or question is covered.
- A powerful search function to pinpoint and connect key concepts in a snap.

In short, *Connect Accounting* offers you and your students powerful tools and features that optimize your time and energies, enabling you to focus on course content, teaching, and student learning. *Connect Accounting* also offers a wealth of content resources for both instructors and students. This state-of-the-art, thoroughly tested system supports you in preparing students for the world that awaits.

For more information about Connect, go to [www.mcgrawhillconnect.com](http://www.mcgrawhillconnect.com) or contact your local McGraw-Hill sales representative.



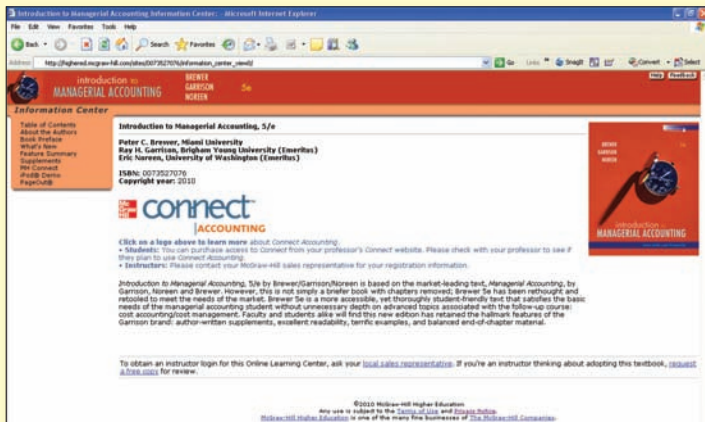
### IPOD® CONTENT

Harness the power of one of the most popular technology tools today—the Apple® iPod®. Our innovative approach allows students to download audio and video presentations right into their iPod and take learning materials with them wherever they go.

Students can visit the Online Learning Center at [www.mhhe.com/brewer5e](http://www.mhhe.com/brewer5e) to download our iPod content. For each chapter of the book they will be able to download narrated lecture presentations, managerial accounting videos, and even self-quizzes designed for use on various versions of iPods. It makes review and study time as easy as putting on earphones.

*It is an excellent, technology oriented, well written book for today's on-the-go generation who do not have time to sit, read, and comprehend. It has all the materials for three dimension learning (read, listen, vision).*

—Sushila Kedia, University of Southern Indiana



## ONLINE LEARNING CENTER (OLC)

[www.mhhe.com/brewer5e](http://www.mhhe.com/brewer5e)

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

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

- Internet-based activities
- Self-grading quizzes
- Alternate problems
- Excel spreadsheets
- PowerPoint slides
- iPod® Content

A **secured Instructor Resource Center** stores your essential course materials to save you prep time before class. The instructor's resource guide, solutions manual, test bank, and PowerPoint slides are now just a couple of clicks away. You will also find useful packaging information and transition notes.

## COURSESMART

CourseSmart is a new way to find and buy eTextbooks. At CourseSmart you can save up to 50 percent off the cost of a print textbook, reduce your impact on the environment, and gain access to powerful Web tools for learning. CourseSmart has the largest selection of eTextbooks available anywhere, offering thousands of the most commonly adopted textbooks from a wide variety of higher education publishers. CourseSmart eTextbooks are available in one standard online reader with full text search, notes and highlighting, and e-mail tools for sharing notes between classmates.



## TEGRITY CAMPUS

Tegrity Campus is a service that makes class time available all the time by automatically capturing every lecture in a searchable format for students to review when they study and complete assignments. With a simple one-click start and stop process, you capture all computer screens and corresponding audio. Students replay any part of any class with easy-to-use browser-based viewing on a PC or Mac.

Educators know that the more students can see, hear, and experience class resources, the better they learn. With Tegrity Campus, students quickly recall key moments by using Tegrity Campus's unique search feature. This search helps students efficiently find what they need, when they need it across an entire semester of class recordings. Help turn all your students' study time into learning moments immediately supported by your lecture.

To learn more about Tegrity watch a 2-minute Flash demo at <http://tegritycampus.mhhe.com>.

## McGRAW-HILL/IRWIN CARES

At McGraw-Hill/Irwin, we understand that getting the most from new technology can be challenging. That's why our services don't stop after you purchase our book. You can e-mail our Product Specialists 24 hours a day, get product training online, or search our knowledge bank of Frequently Asked Questions on our support website.

McGraw-Hill/Irwin Customer Care Contact Information:

For all Customer Support call (800) 331-5094, email [be\\_support@mcgraw-hill.com](mailto:be_support@mcgraw-hill.com), or visit [www.mhhe.com/support](http://www.mhhe.com/support). One of our Technical Support Analysts will be able to assist you in a timely fashion.

# A Great Learning System

## INSTRUCTOR SUPPLEMENTS

### Assurance of Learning Ready

Many educational institutions today are focused on the notion of assurance of learning, an important element of some accreditation standards. *Introduction to Managerial Accounting* is designed specifically to support your assurance of learning initiatives with a simple, yet powerful, solution.

Each test bank question for *Introduction to Managerial Accounting* maps to a specific chapter learning outcome/objective listed in the text. You can use our test bank software, EZ Test, to easily query for learning outcomes/objectives that directly relate to the learning objectives for your course. You can then use the reporting features of EZ Test to aggregate student results in similar fashion, making the collection and presentation of assurance of learning data simple and easy. You can also use our Algorithmic-Diploma Test Bank to do this.

### AACSB Statement

The McGraw-Hill Companies is a proud corporate member of AACSB International. Recognizing the importance and value of AACSB accreditation, we have sought to recognize the curricula guidelines detailed in AACSB standards for business accreditation by connecting selected test bank questions in *Introduction to Managerial Accounting* with the general knowledge and skill guidelines found in the AACSB standards.

The statements contained in *Introduction to Managerial Accounting*, Fifth Edition, are provided only as a guide for the users of this text. The AACSB leaves content coverage and assessment clearly within the realm and control of individual schools, the mission of the school, and the faculty. The AACSB also charges schools with the obligation of doing assessment against their own content and learning goals. While *Introduction to Managerial Accounting*, Fifth Edition, and its teaching package make no claim of any specific AACSB qualification or evaluation, we have labeled selected questions according to the six general knowledge and skills areas.

### Instructor CD-ROM

MHID: 0-07-724362-5

ISBN: 978-0-07-724362-3

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, and Teaching Transparency Masters.

### Instructor's Resource Guide

(Available on the password-protected Instructor OLC and Instructor's Resource CD)

This supplement contains the teaching transparency masters, PowerPoint slides, and extensive chapter-by-chapter lecture notes to help with classroom presentation. It contains useful suggestions for presenting key concepts and ideas.

### Solutions Manual

(Available on the password-protected Instructor OLC and Instructor's Resource CD)

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.

### Test Bank

(Available on the password-protected Instructor OLC and Instructor's Resource CD)

Over 2,000 questions are organized by chapter and include true/false, multiple-choice, and problems. This edition of the test bank includes worked-out solutions and all items have been tied to AACSB-AICPA and Bloom's standards.

### Computerized Test Bank

(Available on the password-protected Instructor OLC and Instructor's Resource CD)

This test bank utilizes McGraw-Hill's EZ Test software to quickly create customized exams. This user-friendly program allows instructors to sort questions by format, edit existing questions, or add new ones. It also can scramble questions for multiple versions of the same test.

# Doesn't Stop with the Book.

## STUDENT SUPPLEMENTS

### Workbook/Study Guide

MHID: 0-07-724364-1

ISBN: 978-0-07-724364-7

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.

### Excel Templates

(Available on the OLC)

Prepared by Jack Terry of ComSource Associates, Inc., 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.

### Practice Set

MHID: 0-07-339619-2

ISBN: 978-0-07-339619-4

Authored by Janice L. Cobb of Texas Christian University, *Doing the Job of the Managerial Accountant* is a real-world application for the Introductory Managerial Accounting student. The case is based on an actual growing, entrepreneurial, manufacturing company that is complex enough to demonstrate decisions management must make, yet simple enough that a sophomore student can easily understand the entire operations of the company. The case requires students to do tasks they would perform working as the managerial accountant for the company. The required tasks are directly related to the concepts learned in all managerial accounting classes. The practice set can be used by the professor as a teaching tool for class lectures, as additional homework assignments, or as a semester project.

### Online Learning Center (OLC)

[www.mhhe.com/brewer5e](http://www.mhhe.com/brewer5e)

The Online Learning Center is full of resources for students, including:

- Online quizzes
- Practice exams
- Internet exercises
- PowerPoint presentations

### iPod® Content

(Available on the OLC)

Contains course-related videos, chapter-specific quizzes, and audio and visual lecture presentations that tie directly to the text and can be downloaded to an iPod or other MP3 player. Icons in the margin of the text direct students to these assets, allowing them to get additional help with difficult topics quickly and easily.

### McGraw-Hill Connect Accounting

McGraw-Hill *Connect Accounting* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success.

McGraw-Hill *Connect Accounting* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge. See page xiv for details.

# Acknowledgments

Suggestions have been received from many of our colleagues throughout the world who have used the prior edition of *Introduction to Managerial Accounting*. This is vital feedback that we rely on in each edition. Each of those who have offered comments and suggestions has our thanks.

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. We thank current and past reviewers who have provided feedback that was enormously helpful in preparing *Introduction to Managerial Accounting*.

## **Fifth Edition Reviewers**

Elizabeth M. Ammann, *Lindenwood University*  
Thomas Arcuri, *Florida Community College at Jacksonville*  
Linda Batiste, *Baton Rouge Community College*  
Debbie Beard, *Southeast Missouri State University*  
Jim Breyley, Jr., *University of New England*  
Leah Cabaniss, *Holyoke Community College*  
Chiaho Chang, *Montclair State University*  
Chak-Tong Chau, *University of Houston*  
Julie Chenier, *Louisiana State University-Baton Rouge*  
Darlene Coarts, *University of Northern Iowa*  
Jay Cohen, *Oakton Community College*  
Debra Cosgrove, *University Of Nebraska-Lincoln*  
Kathy Crusto-Way, *Tarrant County College*  
Peggy Dejong, *Kirkwood Community College*  
Terry Elliott, *Morehead State University*  
Kathleen Fitzpatrick, *University of Toledo-Scott Park*  
Frank Gersich, *Monmouth College*  
Lisa Gillespie, *Loyola University-Chicago*  
David Gorton, *Eastern Washington University*  
Suzanne Gradisher, *University Of Akron*  
Joseph Hagan, *East Carolina University*  
Ron Halsac, *Community College of Allegheny County*  
Heidi Hansel, *Kirkwood Community College*  
Sueann Hely, *West Kentucky Community and Technical College*  
Anita Hope, *Tarrant County College*  
Frank Ilett, *Boise State University*  
Agatha E. Jeffers, *Montclair State University*  
Sushila Kedia, *University of Southern Indiana*  
Debra Kerby, *Truman State University*  
Bonnie K. Klamm, *North Dakota State University*  
Mehmet Kocakulah, *University of Southern Indiana*  
Dan Law, *Gonzaga University*  
Chuo-Hsuan Lee, *SUNY Plattsburgh*  
Harold Little, *Western Kentucky University*  
Rebecca Lohmann, *Southeast Missouri State University*  
Dennis M. Lopez, *University of Texas-San Antonio*  
Catherine Lumbattis, *Southern Illinois University-Carbondale*  
Nace Magner, *Western Kentucky University*  
Ariel Markelevich, *Bernard M. Baruch College*  
Raj Mashruwala, *University of Illinois-Chicago*  
Allen McConnell, *University of Northern Colorado*  
Pam Meyer, *University of Louisiana at Lafayette*  
Lorie Milam, *University of Northern Colorado*  
Earl Mitchell, *Santa Ana College*  
Joseph M. Nicasio, *Westmoreland County Community College*  
Lee Nicholas, *University of Northern Iowa*  
Tracie Nobles, *Austin Community College-Northridge*  
Aileen Ormiston, *Mesa Community College*  
Abbie Gail Parham, *Georgia Southern University*  
Tamara Phelan, *Northern Illinois University*

Grant Pritchard, *Dominican University of California*  
Ronald Reed, *University of Northern Colorado*  
Rick Roscher, *University of North Carolina-Wilmington*  
Luther Ross, *Central Piedmont Community College*  
Anwar Salimi, *California State Polytechnic University-Pomona*  
Amy Santos, *Manatee Community College*  
Henry Schulman, *Grossmont College*  
Randall Serrett, *University of Houston Downtown*  
Michael Stemkoski, *Utah Valley University Orem*  
Gloria Stuart, *Georgia Southern University*  
Leslie Vaughan, *University of Missouri-St. Louis*  
Sharon Walters, *Morehead State University*  
Joseph Weintrop, *Bernard M. Baruch College*  
Clark Wheatley, *Florida International University-Miami*  
Scott White, *Lindenwood University*  
Judith Zander, *Grossmont College*  
Ronald Zhao, *Monmouth University*

## Previous Edition Reviewers

Natalie Allen, *Texas A&M University*  
Rowland Atiase, *University of Texas at Austin*  
Benjamin W. Bean, *Utah Valley State College*  
Sarah Bee, *Seattle University*  
Ramesh C. Bhatia, *Millersville University*  
William J. Bradberry, *New River Community and Technical College*  
Robert Burdette, *Salt Lake Community College*  
Paul E. Dascher, *Stetson University*  
Sandra Devona, *Northern Illinois University*  
Jan Duffy, *Iowa State University*  
Denise M. English, *Boise State University*  
Diane Eure, *Texas State University*  
Benjamin Foster, *University of Louisville*  
Ananda Roop Ganguly, *Purdue University*  
Annette Hebble, *University of St. Thomas*  
Sueann Hely, *West Kentucky Community and Technical College*  
Jay Holmen, *University of Wisconsin-Eau Claire*  
Norma C. Holter, *Towson University*  
Jai S. Kang, *San Francisco State University*  
Roger P. Lewis, *Saint Cloud State University*  
Dawn McKinley, *William Rainey Harper College*  
Laurie B. McWhorter, *Mississippi State University*  
Michael J. Meyer, *Ohio University*  
Robert Milbrath, *University of Houston*  
Valerie Milliron, *California State University, Chico*  
Angela H. Sandberg, *Jacksonville State University*  
Amy Santos, *Manatee Community College*  
Diane Tanner, *University of North Florida*  
Linda Tarrago, *Hillsborough Community College*  
John M. Virchick, *Chapman University*  
Joseph Weintrop, *Baruch College*  
Clark Wheatley, *Florida International University*  
Janice White, *Kalamazoo Valley Community College*  
Jane G. Wiese, *Valencia Community College*

William Zahurak, *Community College of Allegheny County, Allegheny*  
Omneya Abd-Elsalam, *Aston University*  
L. M. Abney, *LaSalle University*  
Sol Ahiahar, *SUNY College at Buffalo*  
William Ambrose, *DeVry University*  
Robert Appleton, *University of North Carolina-Wilmington*  
Leonard Bacon, *California State University, Bakersfield*  
Roderick Barclay, *Texas A&M University*  
Larry Bitner, *Hood College*  
Jay Blazer, *Milwaukee Area Technical College*  
Nancy Bledsoe, *Millsaps College*  
William Blouch, *Loyola College*  
Eugene Blue, *Governor State University*  
Linda Bolduc, *Mount Wachusett Community College*  
Casey Bradley, *Troy State University*  
Marley Brown, *Mt. Hood Community College*  
Betty Jo Browning, *Bradley University*  
Myra Bruegger, *Southeastern Community College*  
Francis Bush, *Virginia Military Institute*  
Rebecca Butler, *Gateway Community College*  
June Calahan, *Redlands Community College*  
John Callister, *Cornell University*  
Annhenrie Campbell, *California State University, Stanislaus*  
Elizabeth Cannata, *Stonehill College*  
Dennis Caplan, *Iowa State University*  
Kay Carnes, *Gonzaga University*  
Siew Chan, *University of Massachusetts, Boston*  
John Chandler, *University of Illinois-Champaign*  
Lawrence Chin, *Golden Gate University*  
Carolyn Clark, *St. Joseph's University*  
Joanne Collins, *California State University-Los Angeles*  
Judith Cook, *Grossmont College*  
Charles Croxford, *Merced College*  
Richard Cummings, *Benedictine College*  
Jill Cunningham, *Santa Fe Community College*  
Alan Czyzewski, *Indiana State University*  
Betty David, *Francis Marion University*  
Deborah Davis, *Hampton University*  
G. DiLorenzo, *Gloucester County College*  
Keith Dusenbery, *Johnson State College*  
James Emig, *Villanova University*  
Michael Farina, *Cerritos College*  
John Farlin, *Ohio Dominican University*  
Harriet Farney, *University of Hartford*  
M.A. Fekrat, *Georgetown University*  
W. L. Ferrara, *Stetson University*  
Jerry Ferry, *University of North Alabama*  
Joan Foster, *Collge Misericordia*  
James Franklin, *Troy State University Montgomery*  
Joseph Galante, *Millersville University of Pennsylvania*  
David Gibson, *Hampden-Sydney College*  
John Gill, *Jackson State University*  
Jackson Gillespie, *University of Delaware*  
Joe Goetz, *Louisiana State University*  
Art Goldman, *University of Kentucky*  
James Gravel, *Husson College*  
Linda Hadley, *University of Dayton*  
Dan Hary, *Southwestern Oklahoma State University*  
Susan Hass, *Simmons College*  
Robert Hayes, *Tennessee State University*

---

James Hendricks, *Northern Illinois University*  
Nancy Thorley Hill, *DePaul University*  
Kathy Ho, *Niagra University*  
Mary Hollars, *Vincennes University*  
Norma Holter, *Towson University*  
Ronald Huntsman, *Texas Lutheran University*  
Wayne Ingalls, *University of Maine College*  
David Jacobson, *Salem State College*  
Martha Janis, *University of Wisconsin-Waukesha*  
Holly Johnston, *Boston University*  
Sanford Kahn, *University of Cincinnati*  
Marsha Kertz, *San Jose State University*  
Michael Klimesh, *Gustav Adolphus University*  
Greg Kordecki, *Clayton College and State University*  
Michael Kulper, *Santa Barbara City College*  
Christopher Kwak, *Ohlone College*  
Steven LaFave, *Augsburg College*  
Thomas Largay, *Thomas College*  
Robert Larson, *Penn State University*  
Chor Lau, *California State University, Los Angeles*  
Angela Letourneau, *Winthrop University*  
Barry Lewis, *Southwest Missouri State University*  
Joan Litton, *Ferrum College*  
G. D. Lorenzo, *Gloucester Community College*  
Bob Mahan, *Milligan College*  
Leland Mansuetti, *Sierra College*  
Lisa Martin, *Western Michigan University*  
Jayne Mass, *Towson University*  
Laura Morgan, *University of New Hampshire*  
Anthony Moses, *Saint Anselm College*  
Daniel Mugavero, *Lake Superior State University*  
Muroki Mwaura, *William Patterson University*

Presha Neidermeyer, *Union College*  
Elizabeth Nolan, *Southwestern Oklahoma State University*  
Michael O'Neill, *Seattle Central Community College*  
George Otto, *Truman College*  
Chei Paik, *George Washington University*  
Eustace Phillip, *Emmanuel College*  
Anthony Piltz, *Rocky Mountain College*  
H. M. Pomroy, *Elizabethtown College*  
Alan Porter, *Eastern New Mexico University*  
Barbara Prince, *Cambridge Community College*  
Ahmad Rahman, *La Roche College*  
Joan Reicosky, *University of Minnesota-Morris*  
Leonardo Rodriguez, *Florida International University*  
Gary Ross, *College of the Southwest*  
Martha Sampsell, *Elmhurst College*  
John Savash-Elmira, *College*  
Roger Scherser, *Edison Community College*  
Henry Schwarzbach, *University of Colorado*  
Eldon Schafer, *University of Arizona*  
Deborah Shafer, *Temple College*  
Ola Smith, *Michigan State University*  
John Snyder, *Florida Technical*  
Soliman Soliman, *Tulane University*  
Alice Steljes, *Illinois Valley Community College*  
Joseph Ugras, *LaSalle University*  
Edward Walker, *University of Texas-Pan American*  
Frank Walker, *Lee College*  
Robert Weprin, *Lourdes College*  
Brent Wickham, *Owens Community College*  
Geri Wink, *University of Texas at Tyler*  
James Wolfson, *Wilson College*

We are grateful for the outstanding support from McGraw-Hill/Irwin. In particular, we would like to thank Stewart Mattson, Editorial Director; Tim Vertovec, Publisher; Emily Hatteberg, Developmental Editor; Pat Frederickson, Lead Project Manager; Debra Sylvester, Lead Production Supervisor; Matt Baldwin, Lead Designer Brian Nacik, Lead Media Project Manager; and Lori Kramer, Senior Photo Research Coordinator.

Finally, we would like to thank Beth Woods for working so hard to ensure an error-free fifth edition.

We are grateful to the Institute of Certified Management Accountants for permission to use questions and/or unofficial answers from past Certificate in Management Accounting (CMA) examinations. Likewise, we thank the American Institute of Certified Public Accountants, the Society of Management Accountants of Canada, and the Chartered Institute of Management Accountants (United Kingdom) for permission to use (or to adapt) selected problems from their examinations. These problems bear the notations CMA, CPA, SMA, and CIMA, respectively.

Peter C. Brewer

Ray H. Garrison

Eric W. Noreen



# CONTENTS

## PROLOGUE

### Managerial Accounting and the Business Environment I

GLOBALIZATION	2
STRATEGY	4
ORGANIZATIONAL STRUCTURE	5
Decentralization	5
The Functional View of Organizations	5
PROCESS MANAGEMENT	7
Lean Production	8
The Lean Thinking Model	8
The Theory of Constraints	10
Six Sigma	11
THE IMPORTANCE OF ETHICS IN BUSINESS	12
Code of Conduct for Management Accountants	14
Company Codes of Conduct	16
Codes of Conduct on the International Level	17
CORPORATE GOVERNANCE	18
The Sarbanes-Oxley Act of 2002	18
ENTERPRISE RISK MANAGEMENT	19
Identifying and Controlling Business Risks	20
CORPORATE SOCIAL RESPONSIBILITY	21
THE CERTIFIED MANAGEMENT ACCOUNTANT (CMA)	23
Summary	24
Glossary	24

## CHAPTER ONE

### Managerial Accounting and Cost Concepts 26

Decision Feature: Management Accounting: It's More than Just Crunching Numbers	27
THE WORK OF MANAGEMENT AND THE NEED FOR MANAGERIAL ACCOUNTING INFORMATION	28
Planning	28
Directing and Motivating	29
Controlling	29
The End Results of Managers' Activities	30
The Planning and Control Cycle	30
COMPARISON OF FINANCIAL AND MANAGERIAL ACCOUNTING	30
Emphasis on the Future	31
Relevance of Data	31
Less Emphasis on Precision	32

Segments of an Organization	32
Generally Accepted Accounting Principles (GAAP)	32
Managerial Accounting—Not Mandatory	32
GENERAL COST CLASSIFICATIONS	33
Manufacturing Costs	33
Direct Materials	33
Direct Labor	34
Manufacturing Overhead	34
Nonmanufacturing Costs	35
PRODUCT COSTS VERSUS PERIOD COSTS	35
Product Costs	35
Period Costs	36
Prime Cost and Conversion Cost	36
COST CLASSIFICATIONS ON FINANCIAL STATEMENTS	38
The Balance Sheet	38
The Income Statement	39
Schedule of Cost of Goods Manufactured	41
PRODUCT COST FLOWS	42
Inventoriable Costs	43
An Example of Cost Flows	44
COST CLASSIFICATIONS FOR PREDICTING COST BEHAVIOR	45
Variable Cost	45
Fixed Cost	47
COST CLASSIFICATIONS FOR ASSIGNING COSTS TO COST OBJECTS	49
Direct Cost	49
Indirect Cost	49
COST CLASSIFICATIONS FOR DECISION MAKING	50
Differential Cost and Revenue	50
Opportunity Cost	51
Sunk Cost	52
Summary	52
Guidance Answer to You Decide	54
Guidance Answers to Concept Checks	54
Review Problem 1: Cost Terms	54
Review Problem 2: Schedule of Cost of Goods Manufactured and Income Statement	55
Glossary	57
Questions	58
Brief Exercises	58
Exercises	62
Problems	64
Building Your Skills	70
Research and Application	71

## CHAPTER TWO

# Systems Design: Job-Order Costing 74

Decision Feature: Two College Students Succeeding as Entrepreneurs 75

### PROCESS AND JOB-ORDER COSTING 76

Process Costing 76

Job-Order Costing 77

### JOB-ORDER COSTING—AN OVERVIEW 78

Measuring Direct Materials Cost 79

Job Cost Sheet 80

Measuring Direct Labor Cost 80

Applying Manufacturing Overhead 82

Using the Predetermined Overhead Rate 83

The Need for a Predetermined Rate 83

Choice of an Allocation Base for Overhead Cost 84

Computation of Unit Costs 86

Summary of Document Flows 86

### JOB-ORDER COSTING—THE FLOW OF COSTS 88

The Purchase and Issue of Materials 88

Issue of Direct and Indirect Materials 88

Labor Cost 89

Manufacturing Overhead Costs 90

Applying Manufacturing Overhead 91

The Concept of a Clearing Account 92

Nonmanufacturing Costs 92

Cost of Goods Manufactured 93

Cost of Goods Sold 94

Summary of Cost Flows 94

### PROBLEMS OF OVERHEAD APPLICATION 98

Underapplied and Overapplied Overhead 98

Disposition of Underapplied or Overapplied Overhead

Balances 99

A General Model of Product Cost Flows 100

Multiple Predetermined Overhead Rates 102

### JOB-ORDER COSTING IN SERVICE COMPANIES 102

Summary 102

Guidance Answers to Decision Maker and You Decide 103

Guidance Answers to Concept Checks 104

Review Problem: Job-Order Costing 104

Glossary 107

Questions 108

Brief Exercises 108

Exercises 110

Problems 114

Building Your Skills 119

Research and Application 122

## CHAPTER THREE

# Systems Design: Activity-Based Costing 124

Decision Feature: The Payoff from Activity-Based Costing 125

### ASSIGNING OVERHEAD COSTS TO PRODUCTS 126

Plantwide Overhead Rate 126

Departmental Overhead Rates 127

Activity-Based Costing (ABC) 127

### DESIGNING AN ACTIVITY-BASED COSTING SYSTEM 129

Hierarchy of Activities 131

An Example of an Activity-Based Costing System

Design 132

### USING ACTIVITY-BASED COSTING 133

Comtek Sound, Inc.'s Basic Data 134

Direct Labor-Hours as a Base 134

Computing Activity Rates 135

Computing Product Costs 135

Shifting of Overhead Cost 137

### TARGETING PROCESS IMPROVEMENTS 138

### EVALUATION OF ACTIVITY-BASED COSTING 140

The Benefits of Activity-Based Costing 140

Limitations of Activity-Based Costing 141

The Cost of Implementing Activity-Based Costing 141

Limitations of the ABC Model 141

Modifying the ABC Model 141

Activity-Based Costing and Service Industries 142

### COST FLOWS IN AN ACTIVITY-BASED COSTING SYSTEM 143

An Example of Cost Flows 143

Basic Data 143

Tracking the Flow of Costs 144

Summary 146

Guidance Answers to Decision Maker and You Decide 147

Guidance Answers to Concept Checks 147

Review Problem: Activity-Based Costing 147

Glossary 149

Questions 150

Brief Exercises 150

Exercises 153

Problems 155

Building Your Skills 161

Research and Application 165

## CHAPTER FOUR

# Systems Design: Process Costing 168

Decision Feature: Costing the “Quicker-Picker-Upper” 169

### COMPARISON OF JOB-ORDER AND PROCESS COSTING 170

Similarities between Job-Order and Process Costing 170

Differences between Job-Order and Process Costing 170

### COST FLOWS IN PROCESS COSTING 171

Processing Departments 171

The Flow of Materials, Labor, and Overhead Costs 172

Materials, Labor, and Overhead Cost Entries 173

Materials Costs 173

Labor Costs	173
Overhead Costs	173
Completing the Cost Flows	174
<b>EQUIVALENT UNITS OF PRODUCTION</b>	<b>176</b>
Weighted-Average Method	176
<b>COMPUTE AND APPLY COSTS</b>	<b>178</b>
Cost per Equivalent Unit—Weighted-Average Method	179
Applying Costs—Weighted-Average Method	180
Cost Reconciliation Report—Weighted-Average Method	180
Summary	181
Guidance Answers to Decision Maker and You Decide	182
Guidance Answers to Concept Checks	182
Review Problem: Process Cost Flows and Costing Units	182
Glossary	185
Questions	185
Brief Exercises	186
Exercises	187
Problems	190
Building Your Skills	194

## **CHAPTER FIVE** **Cost Behavior: Analysis and Use 196**

Decision Feature: The Business of Art Sculpture	197
<b>TYPES OF COST BEHAVIOR PATTERNS</b>	<b>198</b>
Variable Costs	198
The Activity Base	199
Extent of Variable Costs	200
True Variable versus Step-Variable Costs	201
True Variable Costs	201
Step-Variable Costs	201
The Linearity Assumption and the Relevant Range	203
Fixed Costs	203
Types of Fixed Costs	205
Committed Fixed Costs	205
Discretionary Fixed Costs	205
The Trend toward Fixed Costs	206
Is Labor a Variable or a Fixed Cost?	207
Fixed Costs and the Relevant Range	208
Mixed Costs	209
<b>THE ANALYSIS OF MIXED COSTS</b>	<b>210</b>
Diagnosing Cost Behavior with a Scattergraph Plot	213
The High-Low Method	217
The Least-Squares Regression Method	220
Multiple Regression Analysis	222
<b>THE CONTRIBUTION FORMAT INCOME STATEMENT</b>	<b>222</b>
Why a New Income Statement Format?	222
The Contribution Approach	222
Summary	223
Guidance Answers to Decision Maker and You Decide	224

Guidance Answers to Concept Checks	225
Review Problem 1: Cost Behavior	225
Review Problem 2: High-Low Method	226
Glossary	227
Questions	227
Brief Exercises	228
Exercises	230
Problems	232
Building Your Skills	236
Research and Application	238
Appendix 5A: Variable Costing	239
Appendix 5A Summary	246
Appendix 5A Review Problem: Contrasting Variable and Absorption Costing	246
Appendix 5A Glossary	248
Appendix 5A Questions	248
Appendix 5A Exercises and Problems	249

## **CHAPTER SIX** **Cost-Volume-Profit Relationships 256**

Decision Feature: Forget the Theater—Make Money on Cable TV	257
<b>THE BASICS OF COST-VOLUME-PROFIT (CVP) ANALYSIS</b>	<b>259</b>
Contribution Margin	259
CVP Relationships in Equation Form	261
CVP Relationships in Graphic Form	262
Preparing the CVP Graph	262
Contribution Margin Ratio (CM Ratio)	265
Some Applications of CVP Concepts	267
Change in Fixed Cost and Sales Volume	267
Change in Variable Cost and Sales Volume	268
Change in Fixed Cost, Sales Price, and Sales Volume	269
Change in Variable Cost, Fixed Cost, and Sales Volume	270
Change in Selling Price	271
<b>TARGET PROFIT AND BREAK-EVEN ANALYSIS</b>	<b>271</b>
Target Profit Analysis	271
The Equation Method	271
The Formula Method	271
Target Profit Analysis in Terms of Sales Dollars	272
Break-Even Analysis	273
Break-Even in Unit Sales	273
Break-Even in Sales Dollars	274
The Margin of Safety	275
<b>CVP CONSIDERATIONS IN CHOOSING A COST STRUCTURE</b>	<b>277</b>
Cost Structure and Profit Stability	277
Operating Leverage	279

STRUCTURING SALES COMMISSIONS	281
SALES MIX	282
The Definition of Sales Mix	282
Sales Mix and Break-Even Analysis	283
ASSUMPTIONS OF CVP ANALYSIS	284
Summary	285
Guidance Answers to Decision Maker and You Decide	286
Guidance Answers to Concept Checks	287
Review Problem: CVP Relationships	287
Glossary	290
Questions	290
Brief Exercises	291
Exercises	293
Problems	296
Building Your Skills	302
Research and Application	304

## CHAPTER SEVEN

### Profit Planning 306

Decision Feature: <i>Lilo &amp; Stitch</i> on Budget	307
THE BASIC FRAMEWORK OF BUDGETING	308
Advantages of Budgeting	308
Responsibility Accounting	308
Choosing a Budget Period	309
The Self-Imposed Budget	310
Human Factors in Budgeting	311
The Budget Committee	313
The Master Budget: An Overview	314
PREPARING THE MASTER BUDGET	315
The Sales Budget	317
The Production Budget	318
Inventory Purchases—Merchandising Company	320
The Direct Materials Budget	320
The Direct Labor Budget	322
The Manufacturing Overhead Budget	323
The Ending Finished Goods Inventory Budget	325
The Selling and Administrative Expense Budget	326
The Cash Budget	327
The Budgeted Income Statement	331
The Budgeted Balance Sheet	332
Summary	334
Guidance Answers to Decision Maker and You Decide	335
Guidance Answers to Concept Checks	336
Review Problem: Budget Schedules	336
Glossary	338
Questions	339
Brief Exercises	339
Exercises	343
Problems	345
Building Your Skills	354
Research and Application	357

## CHAPTER EIGHT

### Flexible Budgets and Performance Analysis 358

Decision Feature: Controlling Costs—Rain or Shine	359
FLEXIBLE BUDGETS	360
Characteristics of a Flexible Budget	360
Deficiencies of the Static Planning Budget	361
How a Flexible Budget Works	363
FLEXIBLE BUDGET VARIANCES	364
Activity Variances	365
Revenue and Spending Variances	366
A Performance Report Combining Activity and Revenue and Spending Variances	368
Performance Reports in Nonprofit Organizations	370
Performance Reports in Cost Centers	370
FLEXIBLE BUDGETS WITH MULTIPLE COST DRIVERS	371
SOME COMMON ERRORS	373
Summary	374
Guidance Answers to Decision Maker and You Decide	375
Guidance Answers to Concept Checks	375
Review Problem: Variance Analysis Using a Flexible Budget	376
Glossary	377
Questions	378
Brief Exercises	378
Exercises	382
Problems	386
Building Your Skills	391

## CHAPTER NINE

### Standard Costs 396

Decision Feature: Managing Materials and Labor	397
STANDARD COSTS—MANAGEMENT BY EXCEPTION	399
Who Uses Standard Costs?	401
SETTING STANDARD COSTS	401
Ideal versus Practical Standards	401
Setting Direct Material Standards	403
Setting Direct Labor Standards	403
Setting Variable Manufacturing Overhead Standards	405
A GENERAL MODEL FOR VARIANCE ANALYSIS	405
Price and Quantity Variances	405
USING STANDARD COSTS—DIRECT MATERIALS VARIANCES	406
Materials Price Variance—A Closer Look	409
Isolation of Variances	409
Responsibility for the Variance	409
Materials Quantity Variance—A Closer Look	410

USING STANDARD COSTS—DIRECT LABOR VARIANCES	412
Labor Rate Variance—A Closer Look	412
Labor Efficiency Variance—A Closer Look	413
USING STANDARD COSTS—VARIABLE MANUFACTURING OVERHEAD VARIANCES	414
Manufacturing Overhead Variances—A Closer Look	415
VARIANCE ANALYSIS AND MANAGEMENT BY EXCEPTION	417
EVALUATION OF CONTROLS BASED ON STANDARD COSTS	419
Advantages of Standard Costs	419
Potential Problems with the Use of Standard Costs	419
Summary	420
Guidance Answers to Decision Maker and You Decide	421
Guidance Answers to Concept Checks	421
Review Problem: Standard Costs	421
Glossary	423
Questions	424
Brief Exercises	424
Exercises	425
Problems	427
Building Your Skills	432
Appendix 9A: Predetermined Overhead Rates and Overhead Analysis in a Standard Costing System	434
Appendix 9A Summary	440
Appendix 9A Glossary	440
Appendix 9A Exercises and Problems	440
Appendix 9B Journal Entries to Record Variances	445
Appendix 9B Summary	447
Appendix 9B Exercises and Problems	447

## CHAPTER TEN

### Segment Reporting, Decentralization, and the Balanced Scorecard 452

Decision Feature: Sony Attempts to Rebound	453
DECENTRALIZATION IN ORGANIZATIONS	454
Advantages and Disadvantages of Decentralization	454
RESPONSIBILITY ACCOUNTING	455
Cost, Profit, and Investment Centers	455
Cost Center	455
Profit Center	456
Investment Center	456
An Organizational View of Responsibility Centers	456
DECENTRALIZATION AND SEGMENT REPORTING	457
Building a Segmented Income Statement	459
Levels of Segmented Statements	461
Sales and Contribution Margin	463
Traceable and Common Fixed Costs	463
Identifying Traceable Fixed Costs	463
Activity-Based Costing	464

Traceable Costs Can Become Common Costs	465
Segment Margin	465
Segmented Financial Information in External Reports	467
HINDRANCES TO PROPER COST ASSIGNMENT	468
Omission of Costs	468
Inappropriate Methods for Assigning Traceable Costs among Segments	468
Failure to Trace Costs Directly	468
Inappropriate Allocation Base	468
Arbitrarily Dividing Common Costs among Segments	469
EVALUATING INVESTMENT CENTER PERFORMANCE—RETURN ON INVESTMENT	470
The Return on Investment (ROI) Formula	470
Net Operating Income and Operating Assets Defined	471
Understanding ROI	471
Criticisms of ROI	474
RESIDUAL INCOME	475
Motivation and Residual Income	477
Divisional Comparison and Residual Income	478
BALANCED SCORECARD	479
Common Characteristics of Balanced Scorecards	480
A Company's Strategy and the Balanced Scorecard	482
Tying Compensation to the Balanced Scorecard	484
Advantages of Timely and Graphic Feedback	485
Summary	486
Guidance Answers to Decision Maker and You Decide	486
Guidance Answers to Concept Checks	487
Review Problem 1: Segmented Statements	488
Review Problem 2: Return on Investment (ROI) and Residual Income	489
Glossary	490
Questions	490
Brief Exercises	491
Exercises	492
Problems	497
Building Your Skills	504
Research and Application	506

## CHAPTER ELEVEN

### Relevant Costs for Decision Making 508

Decision Feature: Massaging the Numbers	509
COST CONCEPTS FOR DECISION MAKING	510
Identifying Relevant Costs and Benefits	510
Different Costs for Different Purposes	511
An Example of Identifying Relevant Costs and Benefits	512
Reconciling the Total and Differential Approaches	514
Why Isolate Relevant Costs?	516

ADDING AND DROPPING PRODUCT LINES AND OTHER SEGMENTS	518
An Illustration of Cost Analysis	518
A Comparative Format	520
Beware of Allocated Fixed Costs	520
THE MAKE OR BUY DECISION	521
An Example of Make or Buy	522
OPPORTUNITY COST	524
SPECIAL ORDERS	525
UTILIZATION OF A CONSTRAINED RESOURCE	526
Contribution Margin per Unit of the Constrained Resource	527
Managing Constraints	528
Summary	530
Guidance Answer to Decision Maker	531
Guidance Answers to Concept Checks	531
Review Problem: Relevant Costs	532
Glossary	533
Questions	533
Brief Exercises	534
Exercises	537
Problems	541
Building Your Skills	548

## CHAPTER TWELVE Capital Budgeting Decisions 552

Decision Feature: Capital Investments: A Key to Profitable Growth	553
CAPITAL BUDGETING—PLANNING INVESTMENTS	554
Typical Capital Budgeting Decisions	554
The Time Value of Money	555
THE NET PRESENT VALUE METHOD	555
Emphasis on Cash Flows	557
Typical Cash Outflows	558
Typical Cash Inflows	558
Simplifying Assumptions	559
Choosing a Discount Rate	559
An Extended Example of the Net Present Value Method	560
EXPANDING THE NET PRESENT VALUE METHOD	561
The Total-Cost Approach	561
The Incremental-Cost Approach	562
Least-Cost Decisions	563
PREFERENCE DECISIONS—THE RANKING OF INVESTMENT PROJECTS	565
THE INTERNAL RATE OF RETURN METHOD	567
THE NET PRESENT VALUE METHOD AND INCOME TAXES	567
OTHER APPROACHES TO CAPITAL BUDGETING DECISIONS	568
The Payback Method	568
Evaluation of the Payback Method	569

An Extended Example of Payback	570
Payback and Uneven Cash Flows	572
The Simple Rate of Return Method	572
Criticisms of the Simple Rate of Return	574
POSTAUDIT OF INVESTMENT PROJECTS	575
Summary	576
Guidance Answers to Decision Maker and You Decide	576
Guidance Answers to Concept Checks	577
Review Problem: Comparison of Capital Budgeting Methods	577
Glossary	579
Questions	579
Brief Exercises	579
Exercises	581
Problems	582
Building Your Skills	589
Appendix 12A: The Concept of Present Value	592
Appendix 12A Summary	595
Appendix 12A Glossary	596
Appendix 12A Exercises	596
Appendix 12B: Present Value Tables	598

## CHAPTER THIRTEEN “How Well Am I Doing?” Statement of Cash Flows 600

Decision Feature: Understanding Cash Flows	601
THE BASIC APPROACH TO A STATEMENT OF CASH FLOWS	603
Definition of Cash	603
Constructing the Statement of Cash Flows Using Changes in Noncash Balance Sheet Accounts	603
AN EXAMPLE OF A SIMPLIFIED STATEMENT OF CASH FLOWS	605
Constructing a Simplified Statement of Cash Flows	605
The Need for a More Detailed Statement	608
ORGANIZATION OF THE FULL-FLEDGED STATEMENT OF CASH FLOWS	608
Operating Activities	609
Investing Activities	609
Financing Activities	610
OTHER ISSUES IN PREPARING THE STATEMENT OF CASH FLOWS	610
Cash Flows: Gross or Net?	610
Operating Activities: Direct or Indirect Method?	611
AN EXAMPLE OF A FULL-FLEDGED STATEMENT OF CASH FLOWS	612
Eight Basic Steps to Preparing the Statement of Cash Flows	612
Setting Up the Worksheet (Steps 1–4)	614
Adjustments to Reflect Gross, Rather than Net, Amounts (Step 5)	614
Classifying Entries as Operating, Investing, or Financing Activities (Step 6)	616

The Completed Statement of Cash Flows (Steps 7 and 8)	617
Interpretation of the Statement of Cash Flows	618
Depreciation, Depletion, and Amortization	619
<b>FREE CASH FLOW</b>	<b>619</b>
Summary	620
Guidance Answers to Decision Maker and You Decide	621
Guidance Answers to Concept Checks	621
Review Problem	622
Glossary	624
Questions	625
Brief Exercises	625
Exercises	627
Problems	628
Building Your Skills	633
Research and Application	633
Appendix 13A: The Direct Method of Determining the Net Cash Provided by Operating Activities	634
Appendix 13A Summary	636
Appendix 13A Exercises and Problems	636
Appendix 13B: The T-Account Approach to Preparing the Statement of Cash Flows	638
Appendix 13B Brief Exercise	643
<b>CHAPTER FOURTEEN</b>	
<b>“How Well Am I Doing?” Financial Statement Analysis</b>	<b>644</b>
Decision Feature: Getting Paid on Time	645
<b>LIMITATIONS OF FINANCIAL STATEMENT ANALYSIS</b>	<b>646</b>
Comparison of Financial Data	646
The Need to Look beyond Ratios	646
<b>STATEMENTS IN COMPARATIVE AND COMMON-SIZE FORM</b>	<b>646</b>
Dollar and Percentage Changes on Statements	647
Common-Size Statements	650

<b>RATIO ANALYSIS—THE COMMON STOCKHOLDER</b>	<b>652</b>
Earnings per Share	652
Price-Earnings Ratio	653
Dividend Payout and Yield Ratios	653
The Dividend Payout Ratio	654
The Dividend Yield Ratio	654
Return on Total Assets	654
Return on Common Stockholders' Equity	655
Financial Leverage	655
Book Value per Share	656
<b>RATIO ANALYSIS—THE SHORT-TERM CREDITOR</b>	<b>658</b>
Working Capital	658
Current Ratio	658
Acid-Test (Quick) Ratio	659
Accounts Receivable Turnover	659
Inventory Turnover	660
<b>RATIO ANALYSIS—THE LONG-TERM CREDITOR</b>	<b>661</b>
Times Interest Earned Ratio	661
Debt-to-Equity Ratio	662
<b>SUMMARY OF RATIOS AND SOURCES OF COMPARATIVE RATIO DATA</b>	<b>663</b>
Summary	665
Guidance Answers to Decision Maker and You Decide	666
Guidance Answers to Concept Checks	666
Review Problem: Selected Ratios and Financial Leverage	666
Glossary	669
Questions	669
Brief Exercises	669
Exercises	672
Problems	674
Building Your Skills	681
Research and Application	684
Credits	686
Index	687