

Brewer Garrison Noreen



Introduction to
MANAGERIAL ACCOUNTING
seventh edition

introduction_{TO} MANAGERIAL ACCOUNTING

7TH EDITION

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INTRODUCTION TO MANAGERIAL ACCOUNTING, SEVENTH EDITION

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DEDICATION

To our families and to our colleagues who use this book.

—Peter C. Brewer, Ray H. Garrison, and Eric W. Noreen

About the Authors



Peter C. Brewer is a Lecturer in the Department of Accountancy at Wake Forest University. Prior to joining the faculty at Wake Forest, he was an accounting professor at Miami University for 19 years. He holds a BS degree in accounting from Penn State University, an MS degree in accounting from the University of Virginia, and a PhD from the University of Tennessee. He has published 40 articles in a variety of journals including *Management Accounting Research*; the *Journal of Information Systems*; *Cost Management*; *Strategic Finance*; the *Journal of Accountancy*; *Issues in Accounting Education*; and the *Journal of Business Logistics*.

Professor Brewer has served as a member of the editorial boards of the *Journal of Accounting Education* and *Issues in Accounting Education*. His article “Putting Strategy into the Balanced Scorecard” won the 2003 International Federation of Accountants’ Articles of Merit competition, and his articles “Using Six Sigma to Improve the Finance Function” and “Lean Accounting: What’s It All About?” were awarded the Institute of Management Accountants’ Lybrand Gold and Silver Medals in 2005 and 2006. He has received Miami University’s Richard T. Farmer School of Business Teaching Excellence Award.

Prior to joining the faculty at Miami University, Professor Brewer was employed as an auditor for Touche Ross in the firm’s Philadelphia office. He also worked as an internal audit manager for the Board of Pensions of the Presbyterian Church (U.S.A.).





Ray H. Garrison is emeritus professor of accounting at Brigham Young University, Provo, Utah. He received his BS and MS degrees from Brigham Young University and his DBA degree from Indiana University.

As a certified public accountant, Professor Garrison has been involved in management consulting work with both national and regional accounting firms. He has published articles in *The Accounting Review*, *Management Accounting*, and other professional journals. Innovation in the classroom has earned Professor Garrison the Karl G. Maeser Distinguished Teaching Award from Brigham Young University.

Eric W. Noreen has taught at INSEAD in France and the Hong Kong Institute of Science and Technology and is emeritus professor of accounting at the University of Washington. Currently, he is the Accounting Circle Professor of Accounting, Fox School of Business, Temple University.

He received his BA degree from the University of Washington and MBA and PhD degrees from Stanford University. A Certified Management Accountant, he was awarded a Certificate of Distinguished Performance by the Institute of Certified Management Accountants.

Professor Noreen has served as associate editor of *The Accounting Review* and the *Journal of Accounting and Economics*. He has numerous articles in academic journals including: the *Journal of Accounting Research*; *The Accounting Review*; the *Journal of Accounting and Economics*; *Accounting Horizons*; *Accounting, Organizations and Society*; *Contemporary Accounting Research*; the *Journal of Management Accounting Research*; and the *Review of Accounting Studies*.

Professor Noreen has won a number of awards from students for his teaching.



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 accessible 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*:

“The **best introductory managerial accounting book** on the market. Plain and simple.”

—Paige Paulsen, Salt Lake Community College

“This is an **excellent, high quality text** that uses **state-of-the-art technologies** to enhance the learning experience for students.”

—Olen L. Greer, Missouri State University

“It is the **best textbook for introductory managerial accounting to date**. It is concise, well-written and well-organized. With an abundance in real-world flavors, students will see the material as interesting and relevant.”

—Minwoo Lee, Western Kentucky University

“This is a **well organized and written textbook**. It is easy to read and provides **excellent illustrations**. The coverage is clear and presented very well.”

—Gloria Stuart, Georgia Southern University

Brewer's *Introduction to Managerial Accounting* is an **excellent managerial accounting text** that is written with the student in mind. The practical examples, review problems, helpful hints and incorporation of the Excel application all serve to motivate the student to learn the topic.

—Blair Arthur William, Slippery Rock University

“The **best resource to making your job in the classroom easier**. If students read the text and utilize the supplements, they are going to learn *Managerial Accounting* easier and faster than with any other text.”

—Tom Hrubec, Franklin University

“... **excellent depth and breadth of topic coverage** that will prepare the students for their advanced business and accounting classes. The textbook will also lay the foundation to ensure the students have the ability to successfully apply managerial accounting concepts in their full-time professional jobs!”

—Michael Hammond, Missouri State University

“I would describe this text as very well written and organized. Topics covered have been updated nicely to reflect most current business trends. I would say this book is **very student and professor friendly!**”

—Matthew Muller, Adirondack Community College

Introduction to Managerial Accounting, 7th 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: Each chapter opens with a **Decision Feature** vignette that uses real-world examples to show how accounting information is used to make everyday business decisions; **Decision Point boxes** within the chapters help students to develop analytical, critical thinking, and problem-solving skills; and end-of-chapter **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 like narrated, animated Guided Examples 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 *Connect*[®] *Accounting* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success, including *Connect Accounting* provides an online, media-rich, searchable 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 *Connect* library provides your students with a variety of multimedia aids to help them learn managerial accounting. includes quizzes, audio and visual lecture presentations, and course-related videos. Students also can download an iPad[®] app for LearnSmart[®], an adaptive tool that helps students learn faster, study more efficiently, and retain more knowledge.




"The book's **number one feature is the real world examples** it incorporates in each chapter."

—Meghna Singhvi, Florida International University

BREWER / GARRISON / NOREEN'S

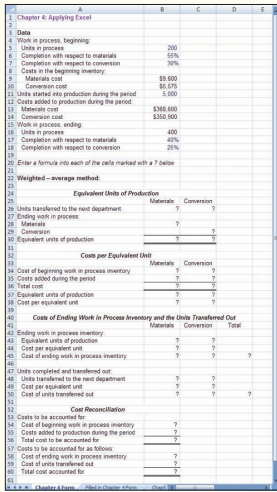
Introduction to Managerial Accounting is full of pedagogy designed to make studying productive and hassle-free. On the following pages, you'll see the kind of engaging, helpful pedagogical features that have made Brewer one of the best-selling Managerial Accounting texts on the market.

APPLYING EXCEL 

Available with McGraw-Hill's *Connect Accounting*.

LO4-2, LO4-3, LO4-4, LO4-5

The Excel worksheet form that appears below is to be used to recreate the extended example on pages 171–173. Download the workbook containing this form in the *Connect Library*. On the website you will also receive instructions about how to use this worksheet form.



You should proceed to the requirements below only after completing your worksheet.

Required:

1. Check your worksheet by changing the beginning work in process inventory to 100 units, the units started into production during the period to 2,500 units, and the units in ending work in process inventory to 200 units, keeping all of the other data the same as in the original example. If your worksheet is operating properly, the cost per equivalent unit for materials should now be \$152.50 and

APPLYING EXCEL

This exciting end-of-chapter feature **links the power of Excel with managerial accounting concepts** by illustrating how Excel functionality can be used to better understand accounting data. Applying Excel goes beyond plugging numbers into a template by providing students with an opportunity to build their own Excel worksheets and formulas. Students are then asked “what if” questions in which they analyze not only **how** related pieces of accounting data affect each other but **why** they do. Applying Excel immediately precedes the Exercises in eleven of the thirteen chapters in the book and is also **integrated with McGraw-Hill Connect Accounting**, allowing students to practice their skills online with algorithmically generated datasets and to watch animated, narrated tutorials on how to use formulas in Excel.

*“An excellent pedagogical feature that helps **further reinforce students’ knowledge** of key concepts in the text book, while **strengthening students’ Excel skills** that are so important in the work place. This will further enhance an already excellent text.”*

—Marianne L. James, California State University, Los Angeles

*“**[Applying Excel is]** an excellent way for students to **programmatically develop spreadsheet skills** without having to be taught spreadsheet techniques by the instructor. A significant associated benefit is that students gain more exposure to the dynamics of accounting information by working with **what-if scenarios**.”*

—Earl Godfrey, Gardner-Webb University

POWERFUL NEW PEDAGOGY

HELPFUL HINT

Helpful Hint boxes are found several times throughout each chapter and highlight a variety of common mistakes, key points, and “pulling it all together” insights for students.

HELPFUL HINT

You need to perform separate equivalent units of production calculations for each manufacturing cost category, such as materials and conversion. When using the weighted-average method to compute equivalent units of production for a cost category you should ignore the completion percentage for the units in beginning inventory. The units transferred to the next department plus the units in ending work in process inventory multiplied by their percentage completion equals the equivalent units of production.

THE FOUNDATIONAL 15

Each chapter now contains one Foundational 15 exercise that includes 15 “building-block” questions related to one concise set of data. These exercises can be used for in-class discussion or as homework assignments. They are found before the Exercises and are available in *Connect Accounting*.



THE FOUNDATIONAL 15

Available with McGraw-Hill's *Connect Accounting*.

Clopack Company manufactures one product that goes through one processing department called Mixing. All raw materials are introduced at the start of work in the Mixing Department. The company uses the weighted-average method to account for units and costs. Its Work in Process T-account for the Mixing Department for June follows (all forthcoming questions pertain to June):

LO4-1, LO4-2,
LO4-3, LO4-4,
LO4-5

Work in Process—Mixing Department	
June 1 balance	28,000
Materials	120,000
Direct labor	79,500
Overhead	97,000
June 30 balance	?
Completed and transferred to Finished Goods	?

The June 1 work in process inventory consisted of 5,000 pounds with \$16,000 in materials cost and \$12,000 in conversion cost. The June 1 work in process inventory was 100% complete with respect to materials and 50% complete with respect to conversion. During June, 37,500 pounds were started into production. The June 30 work in process inventory consisted of 8,000 pounds that were 100% complete with respect to materials and 40% complete with respect to conversion.

Required:

1. Prepare the journal entries to record the raw materials used in production and the direct labor cost incurred.
2. Prepare the journal entry to record the overhead cost applied to production.
3. How many units were completed and transferred to finished goods during the period?

TAKE TWO

Take Two is a new end-of-chapter feature that provides a set of alternate numbers for selected exercises. These alternate numbers can be plugged into the exercise, thereby providing instructors an option to work out the same exercise more than once during class and students an option for additional practice when completing their homework. The Take Two alternate solutions can be found in the instructor's solutions manual.




Estimated direct labor-hours
= 50,000

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 Back/A Look at This Chapter/A Look Ahead** 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.



A LOOK BACK

Chapter 1 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 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.

2

Job-Order Costing

CHAPTER OUTLINE

<p>Job-Order Costing—An Overview</p> <p>Job-Order Costing—An Example</p> <ul style="list-style-type: none"> • Measuring Direct Materials Cost • Job Cost Sheet • Measuring Direct Labor Cost • Computing Predetermined Overhead Rates • Applying Manufacturing Overhead • Manufacturing Overhead—A Closer Look • The Need for a Predetermined Rate • Choice of an Allocation Base for Overhead Cost • Computation of Unit Costs <p>Job-Order Costing—The Flow of Costs</p> <ul style="list-style-type: none"> • The Purchase and Issue of Materials • Labor Cost 	<ul style="list-style-type: none"> • Manufacturing Overhead Costs • Applying Manufacturing Overhead • Nonmanufacturing Costs • Cost of Goods Manufactured • Cost of Goods Sold <p>Schedules of Cost of Goods Manufactured and Cost of Goods Sold</p> <p>Underapplied and Overapplied Overhead—A Closer Look</p> <ul style="list-style-type: none"> • Computing Underapplied and Overapplied Overhead • Disposition of Underapplied or Overapplied Overhead Balances • A General Model of Product Cost Flows • Multiple Predetermined Overhead Rates <p>Job-Order Costing in Service Companies</p>	
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DECISION FEATURE

University Tees: Serving Over 150 Campuses Nationwide

University Tees was founded in 2003 by two **Miami University** college students to provide screen-printing, embroidery, and promotional products for fraternities, sororities, and student organizations. Today, the company, which is headquartered in Cleveland, Ohio, employs as many as four Campus Managers on each of over 150 college campuses across America.

Accurately calculating the cost of each potential customer order is critically important to University Tees because the company needs to be sure that the sales price exceeds the cost associated with satisfying the order. The costs include the cost of the blank T-shirts themselves, printing costs (which vary depending on the quantity of shirts produced and the number of colors per shirt), screen costs (which also vary depending on the number of colors included in a design), shipping costs, and the artwork needed to create a design. The company also takes into account its competitors' pricing strategies when developing its own prices.

Given its success on college campuses, University Tees has introduced a sister company called **On Point Promos** to serve for-profit companies and nonprofit organizations.

Source: Conversation with Joe Haddad, cofounder of University Tees.

LEARNING OBJECTIVES

After studying Chapter 2, you should be able to:

- LO2-1** Compute a predetermined overhead rate.
- LO2-2** Apply overhead cost to jobs using a predetermined overhead rate.
- LO2-3** Compute the total cost and average cost per unit of a job.
- LO2-4** Understand the flow of costs in a job-order costing system and prepare appropriate journal entries to record costs.
- LO2-5** Use T-accounts to show the flow of costs in a job-order costing system.
- LO2-6** Prepare schedules of cost of goods manufactured and cost of goods sold and an income statement.
- LO2-7** Compute underapplied or overapplied overhead cost and prepare the journal entry to close the balance in Manufacturing Overhead to the appropriate account.

*“I like . . . the ‘A Look Back, A Look at This Chapter, A Look Ahead’ and the Chapter Outline. I think **students will appreciate these tools.**”*


—Cathy Larson, Middlesex Community College

*“The concept review questions and the problems allow students to check their knowledge as they go. Many textbooks provide the questions but not the answers so it is nice to have both. The In Business sections provide **useful anecdotes and clarifications** by providing students with **real world examples.**”*

—Nori Pearson, Washington 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.

Cashiers Face the Stopwatch	IN BUSINESS
<p>Operations Workforce Optimization (OWO) writes software that uses engineered labor standards to determine how long it should take a cashier to check out a customer. The software measures an employee's productivity by continuously comparing actual customer checkout times to pre-established labor efficiency standards. For example, the cashiers at Meijer, a regional retailer located in the Midwest, may be demoted or terminated if they do not meet or exceed labor efficiency standards for at least 95% of customers served. In addition to Meijer, OWO has attracted other clients such as Gap, Limited Brands, Office Depot, Nike, and Toys "R" Us, based on claims that its software can reduce labor costs by 5–15%. The software has also attracted the attention of the United Food and Commercial Workers Union, which represents 27,000 Meijer employees. The union has filed a grievance against Meijer related to its cashier monitoring system.</p> <p><small>Source: Vanessa O'Connell, "Stores Count Seconds to Cut Labor Costs," <i>The Wall Street Journal</i>, November 17, 2008, pp. A1–A15.</small></p>	

*“I like the **In Business and Decision Point** features in the book that **bring the concepts down to a real world level.**”*

—Abbie Gail Parham, Georgia Southern University

The **DECISION POINT** 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.

Loan Officer	DECISION POINT
<p>Steve Becker owns Blue Ridge Brewery, a microbrewery in Arden, North Carolina. He charges distributors \$100 per case for his premium beer. The distributors tack on 25% when selling to retailers who in turn add a 30% markup before selling the beer to consumers. In the most recent year, Blue Ridge's revenue was \$8 million and its net operating income was \$700,000. Becker reports that the costs of making one case of his premium beer are \$32 for raw ingredients, \$20 for labor, \$4 for bottling and packaging, and \$12 for utilities.</p> <p>Assume that Becker has approached your bank for a loan. As the loan officer, you should consider a variety of factors, including the company's margin of safety. Assuming that other information about the company is favorable, would you consider Blue Ridge's margin of safety to be comfortable enough to extend a loan?</p>	

*“**The concept checks** for the chapters are great and very useful for the students to **stay focused** on the chapter when reading it. These are one of the **best features of this text.**”*

—Dawn Fischer, Texas Tech University

CONCEPT CHECK

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

7. Which of the following statements is true? (You can select more than one answer.)
- A segment's contribution margin minus its traceable fixed expenses equals the segment margin.
 - A company's common fixed costs should be evenly allocated to business segments when computing the dollar sales for a segment to break even.
 - A segment's traceable fixed costs should include only those costs that would disappear over time if the segment disappeared.
 - Fixed costs that are traceable to one segment may be a common cost of another segment.





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.



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



An Excel[®] 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.



This new marginal end-of-chapter icon indicates the Take Two alternate number set for select exercises.

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 review problems, discussion questions, Excel problems, the Foundational 15 set, exercises, problems, and cases, 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 and in *Connect Accounting*, 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 xviii–xix.

*“As Brewer, Garrison, and Noreen write most of the text’s supplements, these materials really support the textbook material well. The **continuity/consistency between textbook and supporting materials** is not found with some other textbooks. All of the resources available with the Brewer book **help me to be a better teacher!**”*

—Sheri Henson, Western Kentucky

New to the 7th edition

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

Overall:

- In **Business** boxes updated throughout.

All Chapters

- All chapters have additional Concept Check questions based on a review of the LearnSmart heat maps.

Prologue

- The prologue has a new section titled Managerial Accounting: Beyond the Numbers. It has expanded coverage of leadership skills and an expanded set of exercises.

Chapter 1

- The learning objective pertaining to direct and indirect costs has been moved to the front of the chapter to improve the students' ability to understand the material.

Chapter 2

- No significant changes except for two new In Business boxes.

Chapter 3

- No significant changes.

Chapter 4

- No significant changes except for one new In Business box.

Chapter 5

- The assumptions of CVP analysis have been moved from the end of the chapter to the beginning of the chapter. The target profit analysis and break-even analysis learning objectives have been reversed.

Chapter 6

- This chapter has added a new learning objective related to calculating companywide and segment break-even points for companies with traceable fixed costs.

Chapter 7

- Added new text and an exhibit to help students better understand how and why a master budget is created and how Microsoft Excel can be used to create a financial planning model that answers “what-if” questions. Added two new end-of-chapter exercises that enable students to use Microsoft Excel to answer “what-if” questions.

Chapter 8

- In response to customer feedback, we reversed the headings in the flexible budget performance report. The actual results are shown in the far-left column and the planning budget is shown in the far-right column. Similarly, we reversed the headings in the general model for standard cost variance analysis. The actual results ($AQ \times AP$) are shown in the far-left column and the flexible budget ($SQ \times SP$) is shown in the far-right column.

Chapter 9

- No significant changes beyond adding a new Business Focus feature and two new In Business boxes.

Chapter 10

- A section illustrating the meaning of a constraint has been added. Also, several new In Business boxes have been created.

Chapter 11

- Moved the learning objective pertaining to the payback period to the front of the chapter. Adopted a Microsoft Excel-based approach for depicting net present value calculations. Added a discussion of the behavioral implications of the simple rate of return method.

Chapter 12

- No significant changes except for new In Business boxes.

Chapter 13

- The learning objectives have all been redefined to emphasize an internal management perspective. Four new ratios have been added to the text to further enrich the students' learning opportunities.

*“This book provides in depth coverage of basic managerial accounting concepts and procedures in a **clear and concise** manner in logically sequenced topics. It’s designed to help students use accounting information and make a decision. It’s **very easy to read.**”*

—Mehmet Kocakulah, University of Southern Indiana



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

—Tamara Phelan, Northern Illinois University

A MARKET-LEADING BOOK DESERVES

McGraw-Hill Connect® Accounting

McGraw-Hill *Connect Accounting* is a digital teaching and learning environment that gives students the means to better connect with their coursework, with their instructors, and with the important concepts that they will need to know for success now and in the future. With *Connect Accounting*, instructors can deliver assignments, quizzes and tests easily online. Students can review course material and practice important skills. *Connect Accounting* provides the following features:

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In short, *Connect Accounting* offers students powerful tools and features that optimize their time and energy, enabling them to focus on learning.

For more information about *Connect Accounting*, go to www.connect.mheducation.com, or contact your local McGraw-Hill Higher Education representative.

Chapter 2 Homework

1. value: 10.00 points

Espresso Express operates a number of espresso coffee stands in busy suburban malls. The fixed weekly expense of a coffee stand is \$1,200 and the variable cost per cup of coffee served is \$0.22.

Required:

1. Fill in the following table with your estimates of total costs and cost per cup of coffee at the indicated levels of activity for a coffee stand. (Round the Average cost per cup of coffee served to 3 decimal places.)

	Cups of Coffee Served in a Week		
	2,000	2,100	2,200
Fixed cost	\$ 1,200	\$ 1,200	\$ 1,200
Variable cost	440	\$62	
Total cost	\$ 1,640	\$ 1,200	\$ 1,200
Average cost per cup of coffee served			

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LearnSmart is the market-leading adaptive study resource that is proven to strengthen memory recall, increase class retention, and boost grades. LearnSmart allows students to study more efficiently because they are made aware of what they know and don't know.

Accounting - Introduction to Managerial Accounting - Brewer, 7e
Cost-Volume-Profit Relationships

Which of the following must be subtracted from sales to reach the contribution margin? (Check all that apply.)

Check all that apply.

Variable selling and administrative costs

Fixed selling and administrative costs

Variable direct labor

Fixed overhead

Variable direct materials

Variable overhead

Do you know the answer?

I KNOW IT THINK SO UNSURE NO IDEA

Contribution Margin Statement

	Total	Per Unit
Sales (100,000 units)	\$30,000	\$300
Variable expenses	20,000	200
Contribution margin	10,000	100
Fixed expenses	20,000	200
Net operating income	\$ 5,000	

Contribution Margin

Contribution margin is the amount remaining after all variable expenses have been deducted. This is the amount available to cover fixed expenses and then to provide for operating profit.

SmartBook, which is powered by LearnSmart, is the first and only adaptive reading experience designed to change the way students read and learn. It creates a personalized reading experience by highlighting the most impactful concepts a student needs to learn at that moment in time. As a student engages with SmartBook, the reading experience continuously adapts by highlighting content based on what the student knows and doesn't know. This ensures that the focus is on the content he or she needs to learn, while simultaneously promoting long-term retention of material. Use SmartBook's real-time reports to quickly identify the concepts that require more attention from individual students—or the entire class. The end result? Students are more engaged with course content, can better prioritize their time, and come to class ready to participate.

MARKET-LEADING TECHNOLOGY

SmartBook Achieve

SmartBook Achieve™—a revolutionary study and learning experience—pinpoints an individual student’s knowledge gaps and provides targeted, interactive learning help at the moment of need. The rich, dynamic learning resources delivered in that moment of need help students learn the material, retain more knowledge, and earn better grades. The program’s continuously adaptive learning path ensures that every minute a student spends with Achieve is returned as the most value-added minute possible.

Online Assignments

Connect Accounting helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. *Connect* grades homework automatically and gives immediate feedback on any questions students may have missed. Our assignable, gradable end-of-chapter content includes a general journal application that looks and feels more like what you would find in a general ledger software package. Also, select questions have been redesigned to test students’ knowledge more fully. They now include tables for students to work through rather than requiring that all calculations be done offline.



Interactive Presentations

Interactive presentations provide engaging narratives of all chapter learning objectives in an assignable interactive online format. They follow the structure of the text and are organized to match the specific learning objectives within each chapter. While the interactive presentations are not meant to replace the textbook, they provide additional explanation and enhancement of material from the text chapter, allowing students to learn, study, and practice with instant feedback, at their own pace.

Guided Example

Requirement:
Compute the company's predetermined overhead rate for the year.

$$Y = a + bX$$

$$Y = \$126,000 + (\$6.00)(28,000 \text{ direct labor-hours})$$

Component	Amount
Estimated fixed manufacturing overhead	\$126,000
Estimated variable manufacturing overhead:	
\$6.00 per DLH × 28,000 DLHs	168,000
Estimated total manufacturing overhead cost	\$294,000

Estimated total manufacturing overhead	\$294,000
÷ Estimated total direct labor-hours (DLHs)	28,000 DLHs
= Predetermined overhead rate	\$10.50 per DLH

\$10.50 per direct labor-hour.

Guided Examples

The guided examples in *Connect Accounting* provide a narrated, animated step-by-step walkthrough of select exercises similar to those assigned. These short presentations, which can be turned on or off by instructors, provide reinforcement when students need it most.

Auto-graded Excel Simulations

Simulated Excel questions, assignable within *Connect Accounting*, allow students to practice their Excel skills—such as basic formulas and formatting—within the context of managerial accounting. These questions feature animated, narrated Help and Show Me tutorials (when enabled), as well as automatic feedback and grading for both students and professors.

1. Compute a predetermined overhead rate.
2. Prepare schedules of cost of goods manufactured and cost of goods sold.
3. Compute underapplied or overapplied overhead cost to close the balance in Manufacturing Overhead to the appropriate accounts.

5	Estimated total manufacturing overhead cost	\$	275,000		
6	Estimated total direct labor hours		25,000		
7	Actual total direct labor hours		27,760		
9	Actual costs for the year:				
10	Purchase of raw materials (all direct)	\$	575,000		
11	Direct labor cost	\$	536,300		
12	Manufacturing overhead costs	\$	392,750		
14	Inventories:				
15	Raw materials (all direct)	Beginning	Ending		
16		\$	15,000	\$	11,875
17	Work in process	\$	27,875	\$	22,350
18	Finished goods	\$	34,600	\$	26,450
21	1. Compute applied overhead and determine the amount of underapplied or overapplied overhead:				
22	Actual manufacturing overhead cost				
23	Predetermined overhead rate		\$11.00		
24	Actual direct labor hours		27,760		
25	Manufacturing overhead applied				

Student Resource Library

The *Connect Accounting* Student Resources give students access to additional resources such as recorded lectures, online practice materials, an eBook, and more.

McGraw-Hill Connect® Accounting Features

Connect Accounting offers powerful tools, resources, and features to make managing assignments easier, so faculty can spend more time teaching.

Simple Assignment Management and Smart Grading. With McGraw-Hill's *Connect Accounting*, creating assignments is easier than ever, so you can spend more time teaching and less time managing. *Connect Accounting* enables you to:

- Create and deliver assignments and assessments easily with selectable end-of-chapter questions and test bank items.
- Have assignments scored automatically, giving students immediate feedback on their work and comparisons with correct answers.
- Access and review each response; manually change grades or leave comments for students to review.
- Reinforce classroom concepts by assigning LearnSmart modules and Interactive Presentations.

Powerful Instructor and Student Reports

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 reports tab 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.

Connect Insight

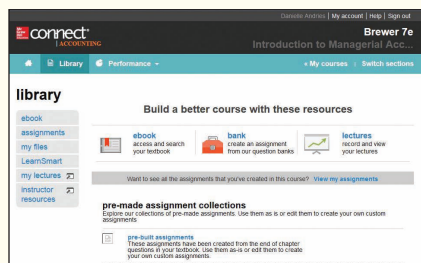
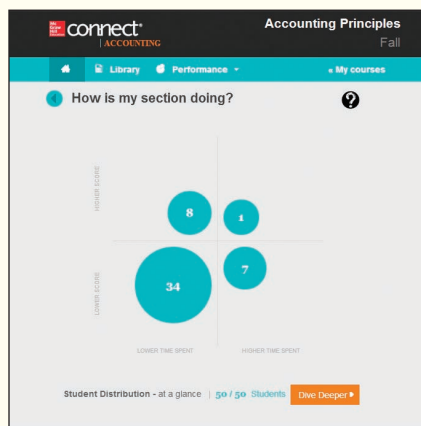
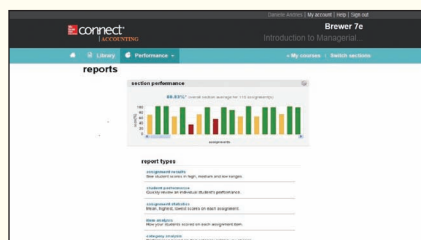
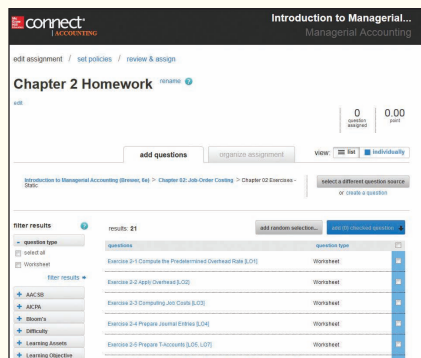
The first and only analytics tool of its kind, Connect Insight™ is a series of visual data displays—each framed by an intuitive question—to provide at-a-glance information regarding how your class is doing. Connect Insight™ provides an at-a-glance analysis on five key insights, available at a moment's notice from your tablet device.

- How are my students doing?
- How is my section doing?
- How is this student doing?
- How are my assignments doing?
- How is this assignment going?

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 access to:

- Solutions manual
- Test bank
- Instructor PowerPoint® slides



- Instructor’s Resource Guide—including Assignment Topic Grids and Lecture Notes that correspond with the Instructor PowerPoints
- Applying Excel Solutions
- Sample Syllabus
- The eBook version of the text
- FIFO Supplement Chapter



TEGRITY CAMPUS: LECTURES 24/7

Tegrity Campus, is a service that makes class time available 24/7 by automatically capturing every lecture. With a simple one-click start-and-stop process, you capture all computer screens and corresponding audio in a format that is easily searchable, frame by frame. Students can replay any part of any class with easy-to-use browser-based viewing on a PC, Mac, or other mobile device.

Help turn your students’ study time into learning moments immediately supported by your lecture. With Tegrity Campus, you also increase intent listening and class participation by easing students’ concerns about note-taking. Lecture Capture will make it more likely you will see students’ faces, not the tops of their heads.

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



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McGraw-Hill Campus™ is a new one-stop teaching and learning experience available to users of any learning management system. This institutional service allows faculty and students to enjoy single sign-on (SSO) access to all McGraw-Hill Higher Education materials, including the award-winning McGraw-Hill *Connect* platform, from directly within the institution’s website. To learn more about MH Campus, visit <http://mhcampus.mhhe.com>.



CUSTOM PUBLISHING THROUGH CREATE

McGraw-Hill Create is a new, self-service website that allows instructors to create custom course materials by drawing upon McGraw-Hill’s comprehensive, cross-disciplinary content. Instructors can add their own content quickly and easily and tap into other rights-secured third-party sources as well, then arrange the content in a way that makes the most sense for their course. Instructors can even personalize their book with the course name and information and choose the best format for their students—color print, black-and-white print, or an eBook.

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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, 7e*, is designed specifically to be support your assurance of learning initiatives with a simple, yet powerful, solution.


Each test bank question for *Introduction Managerial Accounting, 7e* maps to a specific chapter learning outcome/objective listed in the text. You can use our test bank software, EZ Test, and Connect 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 and Connect to aggregate student results in similar fashion, making the collection and presentation of assurance of learning data simple and easy.

AACSB Statement

McGraw-Hill/Irwin 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 questions in Brewer 7e, with the general knowledge and skill guidelines found in the AACSB standards. The statements contained in Brewer 7e 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 does also charge schools with the obligation of doing assessment against their own content and learning goals. While Brewer 7e and its teaching package make no claim of any specific AACSB qualification

or evaluation, we have labeled selected questions according to the eight general knowledge and skills areas. The labels or tags within Brewer 7e are as indicated. There are, of course, many more within the test bank, the text, and the teaching package which might be used as a “standard” for your course. However, the labeled questions are suggested for your consideration.

McGraw-Hill Connect® Accounting


 McGraw-Hill *Connect Accounting* offers a number of powerful tools and features to make managing your classroom easier. *Connect Accounting* with Brewer 7e offers enhanced features and technology to help both you and your students make the most of your time inside and outside the classroom.

EZ Test Online

This test bank in Word format contains multiple-choice questions, essay questions, and short problems. Each test item is coded for level of difficulty, learning objective, AACSB and AICPA skill area, and Bloom’s Taxonomy level. McGraw-Hill’s EZ Test Online is a flexible and easy-to-use electronic testing program that allows instructors to create tests from book-specific items. EZ Test Online accommodates a wide range of question types and allows instructors to add their own questions. Multiple versions of the test can be created and any test can be exported for use with course management systems such as BlackBoard/WebCT. EZ Test Online gives instructors a place to easily administer exams and quizzes online. The program is available for Windows and Macintosh environments.

Student Supplements

McGraw-Hill Connect® Accounting

 McGraw-Hill *Connect Accounting* helps prepare you for your future by enabling faster learning, more efficient studying, and higher retention of knowledge. *Connect Accounting* includes access to a searchable, integrated online version of the text, and much more.

CourseSmart

CourseSmart is a way for faculty to find and review eTextbooks. It's also a great option for students who are interested in accessing their course materials digitally and saving money. CourseSmart offers thousands of the most commonly adopted textbooks across hundreds of courses from a wide variety of higher education publishers. With the CourseSmart eTextbook, students can save up to 45 percent off the cost of a print book, reduce their impact on the environment, and access powerful Web tools for learning. CourseSmart is an online eTextbook, which means users access and view their textbook online when connected to the Internet. Students can also print sections of the book for maximum portability. 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. For more information on CourseSmart, go to www.coursesmart.com.

Applying Excel

Forms available in the *Connect* Student Library.

This feature has been added to Chapters 1-11 of the text. Applying Excel gives you the opportunity to build your own Excel worksheet using Excel formulas. You are then asked to answer “what if” questions, all of which illustrate the relationship among various pieces of accounting data. The Applying Excel feature links directly to the concepts introduced in the chapter, providing you with an invaluable opportunity to apply what you have learned utilizing an application you will use throughout your career.

Check Figures

Available with select problems in the end-of-chapter material, these provide key answers for selected problems and cases.

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*.

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BRIEF CONTENTS

PROLOGUE	Managerial Accounting: An Overview	I
CHAPTER ONE	Managerial Accounting and Cost Concepts	22
CHAPTER TWO	Job-Order Costing	66
CHAPTER THREE	Activity-Based Costing	120
CHAPTER FOUR	Process Costing	160
CHAPTER FIVE	Cost-Volume-Profit Relationships	190
CHAPTER SIX	Variable Costing and Segment Reporting: Tools for Management	242
CHAPTER SEVEN	Master Budgeting	292
CHAPTER EIGHT	Flexible Budgets, Standard Costs, and Variance Analysis	348
CHAPTER NINE	Performance Measurement in Decentralized Organizations	416
CHAPTER TEN	Differential Analysis: The Key to Decision Making	456
CHAPTER ELEVEN	Capital Budgeting Decisions	510
CHAPTER TWELVE	Statement of Cash Flows	556
CHAPTER THIRTEEN	Financial Statement Analysis	600
	Credits	641
	Index	642

CONTENTS

PROLOGUE

Managerial Accounting: An Overview 1

WHAT IS MANAGERIAL ACCOUNTING? 2
Planning 3
Controlling 3
Decision Making 4
WHY DOES MANAGERIAL ACCOUNTING MATTER TO YOUR CAREER? 5
Business Majors 5
Accounting Majors 6
Professional Certification—A Smart Investment 7
MANAGERIAL ACCOUNTING: BEYOND THE NUMBERS 8
An Ethics Perspective 9
Code of Conduct for Management Accountants 9
A Strategic Management Perspective 11
An Enterprise Risk Management Perspective 12
A Corporate Social Responsibility Perspective 13
A Process Management Perspective 14
A Leadership Perspective 16
Intrinsic Motivation 16
Extrinsic Incentives 16
Cognitive Bias 17
Summary 17
Glossary 17
Questions 18
Exercises 18

CHAPTER ONE

Managerial Accounting and Cost Concepts 22

Decision Feature: Lowering Healthcare Costs and Improving Patient Care 23
COST CLASSIFICATIONS FOR ASSIGNING COSTS TO COST OBJECTS 24
Direct Cost 24
Indirect Cost 25
COST CLASSIFICATIONS FOR MANUFACTURING COMPANIES 25
Manufacturing Costs 25
Direct Materials 25
Direct Labor 26
Manufacturing Overhead 26
Nonmanufacturing Costs 26

COST CLASSIFICATIONS FOR PREPARING FINANCIAL STATEMENTS 27

Product Costs 27
Period Costs 28
Prime Cost and Conversion Cost 28
COST CLASSIFICATIONS FOR PREDICTING COST BEHAVIOR 29
Variable Cost 29
Fixed Cost 30
The Linearity Assumption and the Relevant Range 32
Mixed Costs 33

THE ANALYSIS OF MIXED COSTS 35

Diagnosing Cost Behavior with a Scattergraph Plot 36
The High-Low Method 37
The Least-Squares Regression Method 39

TRADITIONAL AND CONTRIBUTION FORMAT INCOME STATEMENTS 41

The Traditional Format Income Statement 41
The Contribution Format Income Statement 42

COST CLASSIFICATIONS FOR DECISION MAKING 43

Differential Cost and Revenue 43
Opportunity Cost and Sunk Cost 44
Summary 44

Guidance Answers to Decision Point 46
Guidance Answers to Concept Checks 46
Review Problem 1: Cost Terms 46
Review Problem 2: High-Low Method 47
Glossary 48
Questions 49
Applying Excel 50
The Foundational 15 51
Exercises 52
Problems 58
Building Your Skills 64

CHAPTER TWO

Job-Order Costing 66

Decision Feature: University Tees: Serving Over 150 Campuses Nationwide 67
JOB-ORDER COSTING—AN OVERVIEW 68
JOB-ORDER COSTING—AN EXAMPLE 69
Measuring Direct Materials Cost 70
Job Cost Sheet 70
Measuring Direct Labor Cost 72
Computing Predetermined Overhead Rates 72
Applying Manufacturing Overhead 73

Manufacturing Overhead—A Closer Look	74
The Need for a Predetermined Rate	74
Choice of an Allocation Base for Overhead Cost	75
Computation of Unit Costs	76
JOB-ORDER COSTING—THE FLOW OF COSTS	77
The Purchase and Issue of Materials	78
Issue of Direct and Indirect Materials	79
Labor Cost	80
Manufacturing Overhead Costs	80
Applying Manufacturing Overhead	81
The Concept of a Clearing Account	82
Nonmanufacturing Costs	83
Cost of Goods Manufactured	83
Cost of Goods Sold	84
SCHEDULES OF COST OF GOODS MANUFACTURED AND COST OF GOODS SOLD	87
UNDERAPPLIED AND OVERAPPLIED OVERHEAD—A CLOSER LOOK	89
Computing Underapplied and Overapplied Overhead	89
Disposition of Underapplied or Overapplied Overhead Balances	91
A General Model of Product Cost Flows	92
Multiple Predetermined Overhead Rates	92
JOB-ORDER COSTING IN SERVICE COMPANIES	93
Summary	94
Guidance Answer to Decision Point	95
Guidance Answers to Concept Checks	96
Review Problem: Job-Order Costing	96
Glossary	99
Questions	99
Applying Excel	100
The Foundational 15	101
Exercises	102
Problems	110
Building Your Skills	116

CHAPTER THREE

Activity-Based Costing 120

Decision Feature: Managing Product Complexity	121
ASSIGNING OVERHEAD COSTS TO PRODUCTS	122
Plantwide Overhead Rate	122
Departmental Overhead Rates	123
Activity-Based Costing (ABC)	123
DESIGNING AN ACTIVITY-BASED COSTING SYSTEM	125
Hierarchy of Activities	125
An Example of an Activity-Based Costing System Design	127
USING ACTIVITY-BASED COSTING	128
Comtek Inc.'s Basic Data	129
Direct Labor-Hours as a Base	130
Computing Activity Rates	130
Computing Product Costs	131

Shifting of Overhead Cost	133
TARGETING PROCESS IMPROVEMENTS	134
EVALUATION OF ACTIVITY-BASED COSTING	134
The Benefits of Activity-Based Costing	134
Limitations of Activity-Based Costing	135
The Cost of Implementing Activity-Based Costing	136
Limitations of the ABC Model	136
Modifying the ABC Model	136
Activity-Based Costing and Service Industries	137
Summary	138
Guidance Answer to Decision Point	139
Guidance Answers to Concept Checks	139
Review Problem: Activity-Based Costing	139
Glossary	141
Questions	142
Applying Excel	142
The Foundational 15	145
Exercises	146
Problems	151
Building Your Skills	156

CHAPTER FOUR

Process Costing 160

Decision Feature: Costing the “Quicker-Picker-Upper”	161
COMPARISON OF JOB-ORDER AND PROCESS COSTING	162
Similarities between Job-Order and Process Costing	162
Differences between Job-Order and Process Costing	162
COST FLOWS IN PROCESS COSTING	163
Processing Departments	163
The Flow of Materials, Labor, and Overhead Costs	163
Materials, Labor, and Overhead Cost Entries	165
Materials Costs	165
Labor Costs	165
Overhead Costs	165
Completing the Cost Flows	166
EQUIVALENT UNITS OF PRODUCTION	166
Weighted-Average Method	168
COMPUTE AND APPLY COSTS	171
Cost per Equivalent Unit—Weighted-Average Method	171
Applying Costs—Weighted-Average Method	172
Cost Reconciliation Report	173
Summary	174
Guidance Answer to Decision Point	174
Guidance Answers to Concept Checks	174
Review Problem: Process Cost Flows and Costing Units	174
Glossary	177
Questions	177
Applying Excel	178

The Foundational 15	179
Exercises	180
Problems	184
Building Your Skills	188

CHAPTER FIVE

Cost-Volume-Profit Relationships 190

Decision Feature: Moreno Turns Around the Los Angeles Angels	191
THE BASICS OF COST-VOLUME-PROFIT (CVP) ANALYSIS	193
Contribution Margin	193
CVP Relationships in Equation Form	196
CVP Relationships in Graphic Form	197
Preparing the CVP Graph	197
Contribution Margin Ratio (CM Ratio)	199
Some Applications of CVP Concepts	201
Change in Fixed Cost and Sales Volume	202
Change in Variable Cost and Sales Volume	203
Change in Fixed Cost, Selling Price, and Sales Volume	204
Change in Variable Cost, Fixed Cost, and Sales Volume	205
Change in Selling Price	205
BREAK-EVEN AND TARGET PROFIT ANALYSIS	206
Break-Even Analysis	206
The Equation Method	206
The Formula Method	207
Break-Even in Dollar Sales	207
Target Profit Analysis	208
The Equation Method	208
The Formula Method	209
Target Profit Analysis in Terms of Dollar Sales	209
The Margin of Safety	210
CVP CONSIDERATIONS IN CHOOSING A COST STRUCTURE	212
Cost Structure and Profit Stability	212
Operating Leverage	213
STRUCTURING SALES COMMISSIONS	215
SALES MIX	216
The Definition of Sales Mix	216
Sales Mix and Break-Even Analysis	216
Summary	218
Guidance Answer to Decision Point	219
Guidance Answers to Concept Checks	220
Review Problem: CVP Relationships	220
Glossary	223
Questions	223
Applying Excel	223
The Foundational 15	225

Exercises	226
Problems	231
Building Your Skills	239

CHAPTER SIX

Variable Costing and Segment Reporting: Tools for Management 242

Decision Feature: Misguided Incentives in the Auto Industry	243
OVERVIEW OF VARIABLE AND ABSORPTION COSTING	244
Variable Costing	244
Absorption Costing	244
Selling and Administrative Expenses	245
Summary of Differences	245
VARIABLE AND ABSORPTION COSTING—AN EXAMPLE	246
Variable Costing Contribution Format Income Statement	247
Absorption Costing Income Statement	249
RECONCILIATION OF VARIABLE COSTING WITH ABSORPTION COSTING INCOME	251
ADVANTAGES OF VARIABLE COSTING AND THE CONTRIBUTION APPROACH	254
Enabling CVP Analysis	254
Explaining Changes in Net Operating Income	255
Supporting Decision Making	255
SEGMENTED INCOME STATEMENTS AND THE CONTRIBUTION APPROACH	256
Traceable and Common Fixed Costs and the Segment Margin	256
Identifying Traceable Fixed Costs	257
Traceable Costs Can Become Common Costs	258
SEGMENTED INCOME STATEMENTS—AN EXAMPLE	258
Levels of Segmented Income Statements	259
SEGMENTED INCOME STATEMENTS—DECISION MAKING AND BREAK-EVEN ANALYSIS	261
Decision Making	261
Break-Even Analysis	262
SEGMENTED INCOME STATEMENTS—COMMON MISTAKES	264
Omission of Costs	264
Inappropriate Methods for Assigning Traceable Costs among Segments	264
Failure to Trace Costs Directly	264
Inappropriate Allocation Base	264
Arbitrarily Dividing Common Costs among Segments	265

INCOME STATEMENTS—AN EXTERNAL REPORTING PERSPECTIVE 265

Companywide Income Statements 265

Segmented Financial Information 266

Summary 267

Guidance Answer to Decision Point 267

Guidance Answers to Concept Checks 268

Review Problem 1: Contrasting Variable and Absorption Costing 268

Review Problem 2: Segmented Income Statements 270

Glossary 272

Questions 272

Applying Excel 272

The Foundational 15 274

Exercises 275

Problems 282

Building Your Skills 288

CHAPTER SEVEN**Master Budgeting 292**

Decision Feature: Planning for a Crisis—Civil War Trust 293

WHAT IS A BUDGET? 294

Advantages of Budgeting 294

Responsibility Accounting 295

Choosing a Budget Period 295

The Self-Imposed Budget 296

Human Factors in Budgeting 296

THE MASTER BUDGET: AN OVERVIEW 297

Seeing the Big Picture 298

PREPARING THE MASTER BUDGET 299

The Beginning Balance Sheet 301

The Budgeting Assumptions 302

The Sales Budget 303

The Production Budget 305

Inventory Purchases—Merchandising Company 306

The Direct Materials Budget 307

The Direct Labor Budget 308

The Manufacturing Overhead Budget 309

The Ending Finished Goods Inventory Budget 310

The Selling and Administrative Expense Budget 311

The Cash Budget 313

The Budgeted Income Statement 317

The Budgeted Balance Sheet 318

Summary 320

Guidance Answer to Decision Point 321

Guidance Answers to Concept Checks 321

Review Problem: Budget Schedules 322

Glossary 323

Questions 324

Applying Excel 324

The Foundational 15 326

Exercises 326

Problems 333

Building Your Skills 343

CHAPTER EIGHT**Flexible Budgets, Standard Costs, and Variance Analysis 348**

Decision Feature: Why Do Companies Need Flexible Budgets? 349

THE VARIANCE ANALYSIS CYCLE 350**FLEXIBLE BUDGETS 351**

Characteristics of a Flexible Budget 351

Deficiencies of the Static Planning Budget 352

How a Flexible Budget Works 354

FLEXIBLE BUDGET VARIANCES 355

Revenue Variances 355

Spending Variances 356

FLEXIBLE BUDGETS WITH MULTIPLE COST DRIVERS 357**STANDARD COSTS—SETTING THE STAGE 358**

Setting Direct Materials Standards 359

Setting Direct Labor Standards 360

Setting Variable Manufacturing Overhead Standards 361

Using Standards in Flexible Budgets 361

A GENERAL MODEL FOR STANDARD COST**VARIANCE ANALYSIS 362****USING STANDARD COSTS—DIRECT MATERIALS****VARIANCES 364**

The Materials Price Variance 365

The Materials Quantity Variance 366

USING STANDARD COSTS—DIRECT LABOR**VARIANCES 367**

The Labor Rate Variance 368

The Labor Efficiency Variance 368

USING STANDARD COSTS—VARIABLE**MANUFACTURING OVERHEAD VARIANCES 370**

The Variable Manufacturing Overhead Rate and Efficiency Variances 371

AN IMPORTANT SUBTLETY IN THE MATERIALS**VARIANCES 373**

Summary 375

Guidance Answer to Decision Point 376

Guidance Answers to Concept Checks 376

Review Problem 1: Variance Analysis Using a Flexible Budget 376

Review Problem 2: Standard Costs 378

Glossary 380

Questions 380

Applying Excel 381

The Foundational 15 382

Exercises 383

Problems	389
Building Your Skills	394
Appendix 8A: Predetermined Overhead Rates and Overhead Analysis in a Standard Costing System	398
Glossary	404
Appendix 8A Exercises and Problems	404
Appendix 8B: Journal Entries to Record Variances	410
Appendix 8B Exercises and Problems	411

CHAPTER NINE

Performance Measurement in Decentralized Organizations 416

Decision Feature: Performance Measures That Drive Financial Results	417
DECENTRALIZATION IN ORGANIZATIONS	418
Advantages and Disadvantages of Decentralization	418
RESPONSIBILITY ACCOUNTING	419
Cost, Profit, and Investment Centers	419
Cost Center	419
Profit Center	419
Investment Center	419
EVALUATING INVESTMENT CENTER PERFORMANCE—RETURN ON INVESTMENT	420
The Return on Investment (ROI) Formula	420
Net Operating Income and Operating Assets Defined	420
Understanding ROI	421
Criticisms of ROI	423
RESIDUAL INCOME	424
Motivation and Residual Income	425
Divisional Comparison and Residual Income	427
OPERATING PERFORMANCE MEASURES	428
Delivery Cycle Time	429
Throughput (Manufacturing Cycle) Time	429
Manufacturing Cycle Efficiency (MCE)	430
BALANCED SCORECARD	432
Common Characteristics of Balanced Scorecards	432
A Company's Strategy and the Balanced Scorecard	435
Tying Compensation to the Balanced Scorecard	437
Summary	438
Guidance Answer to Decision Point	438
Guidance Answers to Concept Checks	439
Review Problem: Return on Investment (ROI) and Residual Income	439
Glossary	440
Questions	440
Applying Excel	441
The Foundational 15	442
Exercises	442
Problems	447
Building Your Skills	454

CHAPTER TEN

Differential Analysis: The Key to Decision Making 456

Decision Feature: Moving Manufacturing Operations Overseas	457
COST CONCEPTS FOR DECISION MAKING	458
Identifying Relevant Costs and Benefits	458
Different Costs for Different Purposes	459
An Example of Identifying Relevant Costs and Benefits	460
Reconciling the Total and Differential Approaches	462
Why Isolate Relevant Costs?	464
ADDING AND DROPPING PRODUCT LINES AND OTHER SEGMENTS	465
An Illustration of Cost Analysis	465
A Comparative Format	467
Beware of Allocated Fixed Costs	467
THE MAKE OR BUY DECISION	469
An Example of Make or Buy	469
OPPORTUNITY COST	471
SPECIAL ORDERS	472
UTILIZATION OF A CONSTRAINED RESOURCE	474
What Is a Constraint?	474
Contribution Margin per Unit of the Constrained Resource	475
Managing Constraints	477
JOINT PRODUCT COSTS AND THE CONTRIBUTION APPROACH	479
The Pitfalls of Allocation	479
Sell or Process Further Decisions	480
Summary	483
Guidance Answer to Decision Point	484
Guidance Answers to Concept Checks	484
Review Problem: Relevant Costs	485
Glossary	486
Questions	486
Applying Excel	487
The Foundational 15	488
Exercises	489
Problems	497
Building Your Skills	505

CHAPTER ELEVEN

Capital Budgeting Decisions 510

Decision Feature: Commercial Delivery Fleets Adopt Electric Trucks	511
CAPITAL BUDGETING—AN OVERVIEW	512
Typical Capital Budgeting Decisions	512
Cash Flows versus Net Operating Income	512
Typical Cash Outflows	512
Typical Cash Inflows	513
The Time Value of Money	513

THE PAYBACK METHOD	514
Evaluation of the Payback Method	514
An Extended Example of Payback	515
Payback and Uneven Cash Flows	516
THE NET PRESENT VALUE METHOD	518
Recovery of the Original Investment	520
An Extended Example of the Net Present Value Method	522
EXPANDING THE NET PRESENT VALUE METHOD	523
Least-Cost Decisions	524
PREFERENCE DECISIONS—THE RANKING OF INVESTMENT PROJECTS	526
THE INTERNAL RATE OF RETURN METHOD	527
THE NET PRESENT VALUE METHOD AND INCOME TAXES	527
THE SIMPLE RATE OF RETURN METHOD	528
POSTAUDIT OF INVESTMENT PROJECTS	530
Summary	531
Guidance Answer to Decision Point	532
Guidance Answers to Concept Checks	532
Review Problem: Comparison of Capital Budgeting Methods	532
Glossary	534
Questions	535
Applying Excel	535
The Foundational 15	536
Exercises	537
Problems	540
Building Your Skills	546
Appendix 11A: The Concept of Present Value	548
Review Problem: Basic Present Value Computations	551
Glossary (Appendix 11A)	552
Appendix 11A Exercises	552
Appendix 11B: Present Value Tables	554

CHAPTER TWELVE

Statement of Cash Flows 556

Decision Feature: Understanding Cash Flows	557
THE STATEMENT OF CASH FLOWS: KEY CONCEPTS	559
Organizing the Statement of Cash Flows	559
Operating Activities: Direct or Indirect Method?	560
The Indirect Method: A Three-Step Process	561
Investing and Financing Activities: Gross Cash Flows	564
Property, Plant, and Equipment	565
Retained Earnings	566
Summary of Key Concepts	567
AN EXAMPLE OF A STATEMENT OF CASH FLOWS	568
Operating Activities	570
Investing Activities	571
Financing Activities	571

Seeing the Big Picture	573
INTERPRETING THE STATEMENT OF CASH FLOWS	575
Consider a Company's Specific Circumstances	575
Consider the Relationships among Numbers	575
Free Cash Flow	576
Earnings Quality	576
Summary	577
Guidance Answer to Decision Point	578
Guidance Answers to Concept Checks	578
Review Problem	579
Glossary	583
Questions	583
The Foundational 15	583
Exercises	585
Problems	588
Building Your Skills	596
Appendix 12A: The Direct Method of Determining the Net Cash Provided by Operating Activities	596
Appendix 12A Exercises and Problems	598

CHAPTER THIRTEEN

Financial Statement Analysis 600

Decision Feature: Keeping an Eye on Dividends	601
LIMITATIONS OF FINANCIAL STATEMENT ANALYSIS	602
Comparing Financial Data across Companies	602
Looking beyond Ratios	602
STATEMENTS IN COMPARATIVE AND COMMON-SIZE FORM	602
Dollar and Percentage Changes on Statements	603
Common-Size Statements	605
RATIO ANALYSIS—LIQUIDITY	607
Working Capital	607
Current Ratio	608
Acid-Test (Quick) Ratio	608
RATIO ANALYSIS—ASSET MANAGEMENT	609
Accounts Receivable Turnover	609
Inventory Turnover	610
Operating Cycle	611
Total Asset Turnover	612
RATIO ANALYSIS—DEBT MANAGEMENT	613
Times Interest Earned Ratio	613
Debt-to-Equity Ratio	614
Equity Multiplier	614
RATIO ANALYSIS—PROFITABILITY	615
Gross Margin Percentage	615
Net Profit Margin Percentage	616
Return on Total Assets	616
Return on Equity	617
RATIO ANALYSIS—MARKET PERFORMANCE	618
Earnings per Share	618
Price-Earnings Ratio	618

Dividend Payout and Yield Ratios	619	Glossary	626
The Dividend Payout Ratio	619	Questions	626
The Dividend Yield Ratio	619	The Foundational 15	626
Book Value per Share	620	Exercises	627
SUMMARY OF RATIOS AND SOURCES OF		Problems	632
COMPARATIVE RATIO DATA	620	Building Your Skills	638
Summary	622	Credits	641
Guidance Answer to Decision Point	623	Index	642
Guidance Answers to Concept Checks	623		
Review Problem: Selected Ratios and Financial Leverage	624		



A LOOK AT THE PROLOGUE

The Prologue defines managerial accounting and explains why it is important to the future careers of all business students. It also explains how managerial accounting involves more than just quantitative calculations.

A LOOK AHEAD

Chapter 1 defines many of the cost terms that will be used throughout the textbook. It explains that in managerial accounting the term cost is used in many different ways depending on the immediate needs of management.

Managerial Accounting: An Overview

PROLOGUE

PROLOGUE OUTLINE

What Is Managerial Accounting?

- Planning
- Controlling
- Decision Making

Why Does Managerial Accounting Matter to Your Career?

- Business Majors
- Accounting Majors

Managerial Accounting: Beyond the Numbers

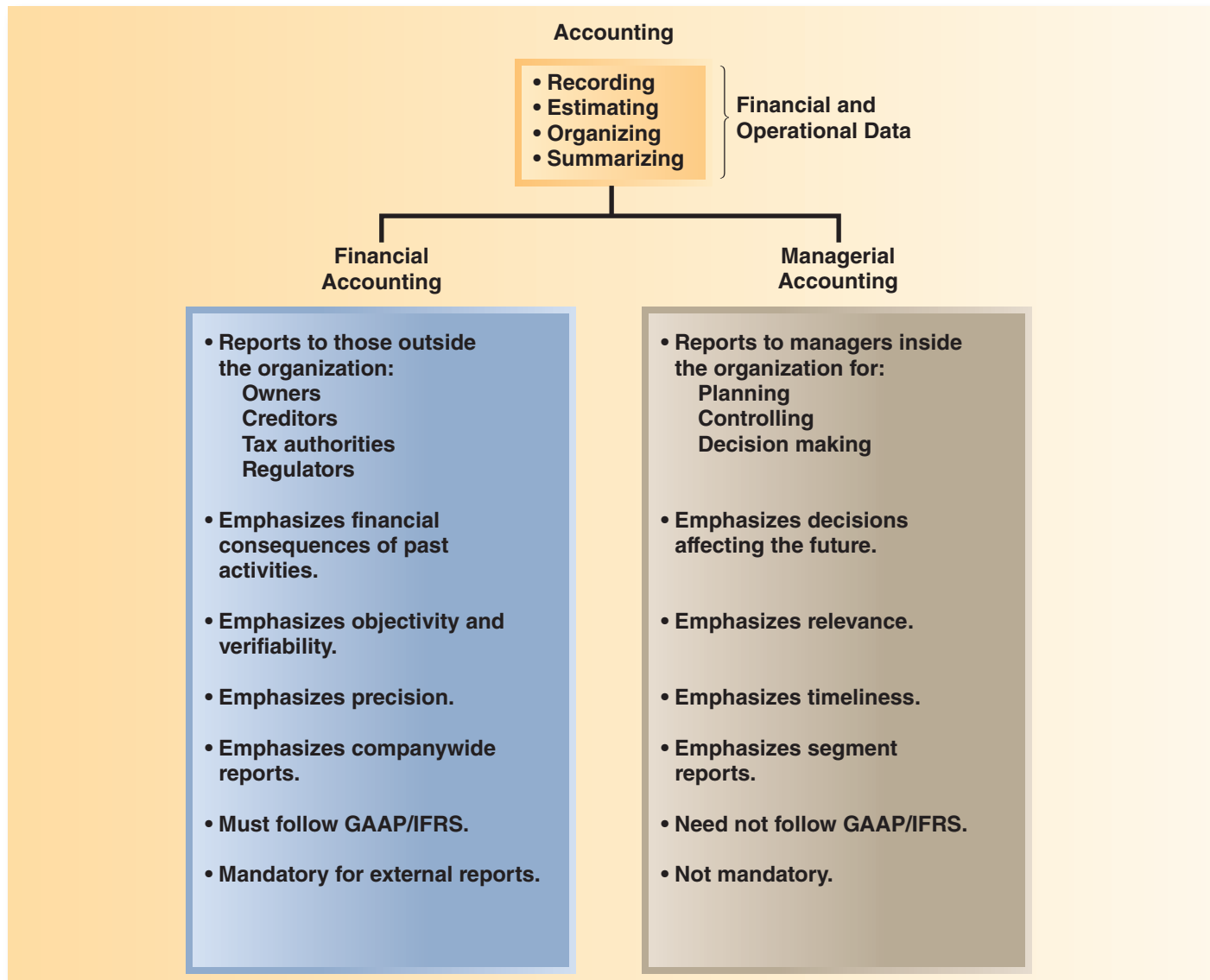
- An Ethics Perspective
- A Strategic Management Perspective
- An Enterprise Risk Management Perspective
- A Corporate Social Responsibility Perspective
- A Process Management Perspective
- A Leadership Perspective

This prologue explains why **managerial accounting** is important to the future careers of all business students. It begins by answering two questions: (1) What is managerial accounting? and (2) Why does managerial accounting matter to your career? It concludes by discussing six topics—ethics, strategic management, enterprise risk management, corporate social responsibility, process management, and leadership—that define the business context for applying the quantitative aspects of managerial accounting.

WHAT IS MANAGERIAL ACCOUNTING?

Many students enrolled in this course will have recently completed an introductory *financial accounting* course. **Financial accounting** is concerned with reporting financial information to external parties, such as stockholders, creditors, and regulators. **Managerial accounting** is concerned with providing information to managers for use within the organization. Exhibit P-1 summarizes seven key differences between financial and managerial accounting. It recognizes that the fundamental difference between financial and managerial accounting is that financial accounting serves the needs of those *outside* the organization, whereas managerial accounting serves the needs of managers employed *inside* the

EXHIBIT P-1 Comparison of Financial and Managerial Accounting



organization. Because of this fundamental difference in users, financial accounting emphasizes the financial consequences of past activities, objectivity and verifiability, precision, and companywide performance, whereas managerial accounting emphasizes decisions affecting the future, relevance, timeliness, and *segment* performance. A **segment** is a part or activity of an organization about which managers would like cost, revenue, or profit data. Examples of business segments include product lines, customer groups (segmented by age, ethnicity, gender, volume of purchases, etc.), geographic territories, divisions, plants, and departments. Finally, financial accounting is mandatory for external reports and it needs to comply with rules, such as generally accepted accounting principles (GAAP) and international financial reporting standards (IFRS), whereas managerial accounting is not mandatory and it does not need to comply with externally imposed rules.

As mentioned in Exhibit P-1, managerial accounting helps managers perform three vital activities—*planning*, *controlling*, and *decision making*. **Planning** involves establishing goals and specifying how to achieve them. **Controlling** involves gathering feedback to ensure that the plan is being properly executed or modified as circumstances change. **Decision making** involves selecting a course of action from competing alternatives. Now let's take a closer look at these three pillars of managerial accounting.

Planning

Assume that you work for **Procter & Gamble (P&G)** and that you are in charge of the company's campus recruiting for all undergraduate business majors. In this example, your planning process would begin by establishing a goal such as: our goal is to recruit the "best and brightest" college graduates. The next stage of the planning process would require specifying how to achieve this goal by answering numerous questions such as:

- How many students do we need to hire in total and from each major?
- What schools do we plan to include in our recruiting efforts?
- Which of our employees will be involved in each school's recruiting activities?
- When will we conduct our interviews?
- How will we compare students to one another to decide who will be extended job offers?
- What salary will we offer our new hires? Will the salaries differ by major?
- How much money can we spend on our recruiting efforts?

As you can see, there are many questions that need to be answered as part of the planning process. Plans are often accompanied by a *budget*. A **budget** is a detailed plan for the future that is usually expressed in formal quantitative terms. As the head of recruiting at P&G, your budget would include two key components. First, you would have to work with other senior managers inside the company to establish a budgeted amount of total salaries that can be offered to all new hires. Second, you would have to create a budget that quantifies how much you intend to spend on your campus recruiting activities.

Controlling

Once you established and started implementing P&G's recruiting plan, you would transition to the control process. This process would involve gathering, evaluating, and responding to feedback to ensure that this year's recruiting process meets expectations. It would also include evaluating the feedback in search of ways to run a more effective recruiting campaign next year. The control process would involve answering questions such as:

- Did we succeed in hiring the planned number of students within each major and at each school?
- Did we lose too many exceptional candidates to competitors?
- Did each of our employees involved in the recruiting process perform satisfactorily?

- Is our method of comparing students to one another working?
- Did the on-campus and office interviews run smoothly?
- Did we stay within our budget in terms of total salary commitments to new hires?
- Did we stay within our budget regarding spending on recruiting activities?

As you can see, there are many questions that need to be answered as part of the control process. When answering these questions your goal would be to go beyond simple yes or no answers in search of the underlying reasons why performance exceeded or failed to meet expectations. Part of the control process includes preparing *performance reports*. A **performance report** compares budgeted data to actual data in an effort to identify and learn from excellent performance and to identify and eliminate sources of unsatisfactory performance. Performance reports can also be used as one of many inputs to help evaluate and reward employees.

Although this example focused on P&G's campus recruiting efforts, we could have described how planning enables **FedEx** to deliver packages across the globe overnight, or how it helped **Apple** develop and market the iPad. We could have discussed how the control process helps **Pfizer**, **Eli Lilly**, and **Abbott Laboratories** ensure that their pharmaceutical drugs are produced in conformance with rigorous quality standards, or how **Kroger** relies on the control process to keep its grocery shelves stocked. We also could have looked at planning and control failures such as **BP**'s massive oil spill in the Gulf of Mexico. In short, all managers (and that probably includes you someday) perform planning and controlling activities.

Decision Making

Perhaps the most basic managerial skill is the ability to make intelligent, data-driven decisions. Broadly speaking, many of those decisions revolve around the following three questions. *What* should we be selling? *Who* should we be serving? *How* should we execute? Exhibit P-2 provides examples of decisions pertaining to each of these three categories.

The left-hand column of Exhibit P-2 suggests that every company must make decisions related to the products and services that it sells. For example, each year **Procter & Gamble** must decide how to allocate its marketing budget across numerous brands that each generates over \$1 billion in sales as well as other brands that have promising growth potential. **Mattel** must decide what new toys to introduce to the market. **Southwest Airlines** must decide what ticket prices to establish for each of its thousands of flights per day. **General Motors** must decide whether to discontinue certain models of automobiles.

The middle column of Exhibit P-2 indicates that all companies must make decisions related to the customers that they serve. For example, **Sears** must decide how to allocate its marketing budget between products that tend to appeal to male versus female customers. **FedEx** must decide whether to expand its services into new markets across the globe. **Hewlett-Packard** must decide what price discounts to offer corporate clients that purchase large volumes of its products. A bank must decide whether to discontinue customers that may be unprofitable.

EXHIBIT P-2 Examples of Decisions

What should we be selling?	Who should we be serving?	How should we execute?
What products and services should be the focus of our marketing efforts?	Who should be the focus of our marketing efforts?	How should we supply our parts and services?
What new products and services should we offer?	Who should we start serving?	How should we expand our capacity?
What prices should we charge for our products and services?	Who should pay price premiums or receive price discounts?	How should we reduce our capacity?
What products and services should we discontinue?	Who should we stop serving?	How should we improve our efficiency and effectiveness?

The right-hand column of Exhibit P-2 shows that companies also make decisions related to how they execute. For example, **Boeing** must decide whether to rely on outside vendors such as **Goodrich**, **Saab**, and **Rolls-Royce** to manufacture many of the parts used to make its airplanes. **Cintas** must decide whether to expand its laundering and cleaning capacity in a given geographic region by adding square footage to an existing facility or by constructing an entirely new facility. In an economic downturn, a manufacturer might have to decide whether to eliminate one 8-hour shift at three plants or to close one plant. Finally, all companies have to decide among competing improvement opportunities. For example, a company may have to decide whether to implement a new software system, to upgrade a piece of equipment, or to provide extra training to its employees.

This portion of the prologue has explained that the three pillars of managerial accounting are planning, controlling, and decision making. This book helps prepare you to become an effective manager by explaining how to make intelligent data-driven decisions, how to create financial plans for the future, and how to continually make progress toward achieving goals by obtaining, evaluating, and responding to feedback.

WHY DOES MANAGERIAL ACCOUNTING MATTER TO YOUR CAREER?

Many students feel anxious about choosing a major because they are unsure if it will provide a fulfilling career. To reduce these anxieties, we recommend deemphasizing what you cannot control about the future; instead focusing on what you can control right now. More specifically, concentrate on answering the following question: What can you do now to prepare for success in an unknown future career? The best answer is to learn skills that will make it easier for you to adapt to an uncertain future. You need to become adaptable!

Whether you end up working in the United States or abroad, for a large corporation, a small entrepreneurial company, a nonprofit organization, or a governmental entity, you'll need to know how to plan for the future, how to make progress toward achieving goals, and how to make intelligent decisions. In other words, managerial accounting skills are useful in just about any career, organization, and industry. If you commit energy to this course, you'll be making a smart investment in your future—even though you cannot clearly envision it. Next, we will elaborate on this point by explaining how managerial accounting relates to the future careers of business majors and accounting majors.

Business Majors

Exhibit P-3 provides examples of how planning, controlling, and decision making affect three majors other than accounting—marketing, supply chain management, and human resource management.

The left-hand column of Exhibit P-3 describes some planning, controlling, and decision-making applications in the marketing profession. For example, marketing managers make planning decisions related to allocating advertising dollars across various communication mediums and to staffing new sales territories. From a control standpoint, they may closely track sales data to see if a budgeted price cut is generating an anticipated increase in unit sales, or they may study inventory levels during the holiday shopping season so that they can adjust prices as needed to optimize sales. Marketing managers also make many important decisions such as whether to bundle services together and sell them for one price or to sell each service separately. They may also decide whether to sell products directly to the customer or to sell to a distributor, who then sells to the end consumer.

The middle column of Exhibit P-3 states that supply chain managers have to plan how many units to produce to satisfy anticipated customer demand. They also need to budget for operating expenses such as utilities, supplies, and labor costs. In terms of control, they monitor actual spending relative to the budget, and closely watch operational measures such as the number of defects produced relative to the plan. Supply chain managers make

EXHIBIT P-3 Relating Managerial Accounting to Three Business Majors

	Marketing	Supply Chain Management	Human Resource Management
Planning	How much should we budget for TV, print, and Internet advertising?	How many units should we plan to produce next period?	How much should we plan to spend for occupational safety training?
	How many salespeople should we plan to hire to serve a new territory?	How much should we budget for next period's utility expense?	How much should we plan to spend on employee recruitment advertising?
Controlling	Is the budgeted price cut increasing unit sales as expected?	Did we spend more or less than expected for the units we actually produced?	Is our employee retention rate exceeding our goals?
	Are we accumulating too much inventory during the holiday shopping season?	Are we achieving our goal of reducing the number of defective units produced?	Are we meeting our goal of completing timely performance appraisals?
Decision Making	Should we sell our services as one bundle or sell them separately?	Should we transfer production of a component part to an overseas supplier?	Should we hire an on-site medical staff to lower our health care costs?
	Should we sell directly to customers or use a distributor?	Should we redesign our manufacturing process to lower inventory levels?	Should we hire temporary workers or full-time employees?

numerous decisions, such as deciding whether to transfer production of a component part to an overseas supplier. They also decide whether to invest in redesigning a manufacturing process to reduce inventory levels.

The right-hand column of Exhibit P-3 explains how human resource managers make a variety of planning decisions, such as budgeting how much to spend on occupational safety training and employee recruitment advertising. They monitor feedback related to numerous management concerns, such as employee retention rates and the timely completion of employee performance appraisals. They also help make many important decisions such as whether to hire on-site medical staff in an effort to lower health care costs, and whether to hire temporary workers or full-time employees in an uncertain economy.

For brevity, Exhibit P-3 does not include all business majors, such as finance, management information systems, and economics. Can you explain how planning, controlling, and decision-making activities would relate to these majors?

Accounting Majors

Many accounting graduates begin their careers working for public accounting firms that provide a variety of valuable services for their clients. Some of these graduates will build successful and fulfilling careers in the public accounting industry; however, most will leave public accounting at some point to work in other organizations. In fact, the **Institute of Management Accountants** (IMA) estimates that more than 80% of professional accountants in the United States work in nonpublic accounting environments (www.imanet.org/about_ima/our_mission.aspx).

The public accounting profession has a strong financial accounting orientation. Its most important function is to protect investors and other external parties by assuring them that companies are reporting historical financial results that comply with applicable accounting rules. Managerial accountants also have strong financial accounting skills. For example, they play an important role in helping their organizations design and

A Networking Opportunity

IN BUSINESS

The **Institute of Management Accountants** (IMA) is a network of more than 70,000 accounting and finance professionals from over 120 countries. Every year the IMA hosts a student leadership conference that attracts 300 students from over 50 colleges and universities. Guest speakers at past conferences have discussed topics such as leadership, advice for a successful career, how to market yourself in a difficult economy, and excelling in today's multigenerational workforce. One student who attended the conference said, "I liked that I was able to interact with professionals who are in fields that could be potential career paths for me." For more information on this worthwhile networking opportunity, contact the IMA at the phone number and website shown below.

Source: Conversation with Jodi Ryan, the Institute of Management Accountants' Director, Education/Corporate Partnerships. (201) 474-1556 or visit its website at www.imanet.org.

maintain financial reporting systems that generate reliable financial disclosures. However, the primary role of managerial accountants is to partner with their co-workers within the organization to improve performance.

Given the 80% figure mentioned above, if you are an accounting major there is a very high likelihood that your future will involve working for a nonpublic accounting employer. Your employer will expect you to have strong financial accounting skills, but more importantly, it will expect you to help improve organizational performance by applying the planning, controlling, and decision-making skills that are the foundation of managerial accounting.

Professional Certification—A Smart Investment If you plan to become an accounting major, the Certified Management Accountant (CMA) designation is a globally respected credential (sponsored by the IMA) that will increase your credibility, upward mobility, and compensation. Exhibit P-4 summarizes the topics covered in the two-part CMA exam. For brevity, we are not going to define all the terms included in this exhibit. Its purpose is simply to emphasize that the CMA exam focuses on the planning, controlling, and decision-making skills that are critically important to nonpublic accounting employers. The CMA's internal management orientation is a complement to the highly respected Certified Public Accountant (CPA) exam that focuses on rule-based compliance—assurance standards, financial accounting standards, business law, and the tax code. Information about becoming a CMA is available on the IMA's website (www.imanet.org) or by calling 1-800-638-4427.

<i>Part 1</i>	<i>Financial Reporting, Planning, Performance, and Control</i>
	External financial reporting decisions
	Planning, budgeting, and forecasting
	Performance management
	Cost management
	Internal controls
<i>Part 2</i>	<i>Financial Decision Making</i>
	Financial statement analysis
	Corporate finance
	Decision analysis
	Risk management
	Investment decisions
	Professional ethics

EXHIBIT P-4
CMA Exam Content
Specifications

IN BUSINESS

How's the Pay?

The Institute of Management Accountants has created the following table that allows individuals to estimate what their salary would be as a management accountant.

			Your Calculation
Start with this base amount		\$75,879	\$75,879
If you are top-level management	ADD	\$48,471	
OR, if you are senior-level management	ADD	\$26,516	
OR, if you are entry-level management	SUBTRACT	\$22,137	
Number of years in the field _____	TIMES	\$7	
If you have an advanced degree.....	ADD	\$14,662	
If you hold the CMA	ADD	\$19,992	
If you hold the CPA	ADD	\$15,837	_____
Your estimated salary level			=====

For example, if you make it to top-level management in 10 years, have an advanced degree and a CMA, your estimated salary would be \$159,074 [$\$75,879 + \$48,471 + (10 \times 7) + \$14,662 + \$19,992$].

Source: Lee Schiffel, and Coleen Wilder, "IMA 2013 Salary Survey. Rainy Days Persist," *Strategic Finance* June 2014, pp. 23–39.

MANAGERIAL ACCOUNTING: BEYOND THE NUMBERS

Exhibit P–5 summarizes how each chapter of the book teaches measurement skills that managers use on the job every day. For example, Chapter 7 teaches you the measurement skills that managers use to answer the question—how should I create a financial plan for next year? Chapter 8 teaches you the measurement skills that managers use to answer the

EXHIBIT P–5 Measurement Skills: A Manager's Perspective

Chapter Number	The Key Question from a Manager's Perspective
Chapter 1	What cost classifications do I use for different management purposes?
Chapters 2 & 4	What is the value of our ending inventory and cost of goods sold for external reporting purposes?
Chapter 3	How profitable is each of our products, services, and customers?
Chapter 5	How will my profits change if I change my selling price, sales volume, or costs?
Chapter 6	How should the income statement be presented?
Chapter 7	How should I create a financial plan for next year?
Chapter 8	How well am I performing relative to my plan?
Chapter 9	What performance measures should we monitor to ensure that we achieve our strategic goals?
Chapter 10	How do I quantify the profit impact of pursuing one course of action versus another?
Chapter 11	How do I make long-term capital investment decisions?
Chapter 12	What cash inflows and outflows explain the change in our cash balance?
Chapter 13	How can we analyze our financial statements to better understand our performance?

question—how well am I performing relative to my plan? Chapter 3 teaches you measurement skills related to product, service, and customer profitability. However, it is vitally important that you also understand managerial accounting involves more than just “crunching numbers.” To be successful, managers must complement their measurement skills with six business management perspectives that “go beyond the numbers” to enable intelligent planning, control, and decision making.

An Ethics Perspective

Ethical behavior is the lubricant that keeps the economy running. Without that lubricant, the economy would operate much less efficiently—less would be available to consumers, quality would be lower, and prices would be higher. In other words, without fundamental trust in the integrity of business, the economy would operate much less efficiently. Thus, for the good of everyone—including profit-making companies—it is vitally important that business be conducted within an ethical framework that builds and sustains trust.

Code of Conduct for Management Accountants The **Institute of Management Accountants** (IMA) of the United States has adopted an ethical code called the *Statement of Ethical Professional Practice* that describes in some detail the ethical responsibilities of management accountants. Even though the standards were developed specifically for management accountants, they have much broader application. The standards consist of two parts that are presented in full in Exhibit P-6 (page 10). The first part provides general guidelines for ethical behavior. In a nutshell, a management accountant has ethical responsibilities in four broad areas: first, to maintain a high level of professional competence; second, to treat sensitive matters with confidentiality; third, to maintain personal integrity; and fourth, to disclose information in a credible fashion. The second part of the standards specifies what should be done if an individual finds evidence of ethical misconduct.

The ethical standards provide sound, practical advice for management accountants and managers. Most of the rules in the ethical standards are motivated by a very practical consideration—if these rules were not generally followed in business, then the economy and all of us would suffer. Consider the following specific examples of the consequences of not abiding by the standards:

- Suppose employees could not be trusted with confidential information. Then top managers would be reluctant to distribute such information within the company and, as a result, decisions would be based on incomplete information and operations would deteriorate.
- Suppose employees accepted bribes from suppliers. Then contracts would tend to go to the suppliers who pay the highest bribes rather than to the most competent suppliers. Would you like to fly in aircraft whose wings were made by the subcontractor who paid the highest bribe? Would you fly as often? What would happen to the airline industry if its safety record deteriorated due to shoddy workmanship on contracted parts and subassemblies?
- Suppose the presidents of companies routinely lied in their annual reports and financial statements. If investors could not rely on the basic integrity of a company’s financial statements, they would have little basis for making informed decisions. Suspecting the worst, rational investors would pay less for securities issued by companies and may not be willing to invest at all. As a consequence, companies would have less money for productive investments—leading to slower economic growth, fewer goods and services, and higher prices.

Not only is ethical behavior the lubricant for our economy, it is the foundation of managerial accounting. The numbers that managers rely on for planning, control, and decision making are meaningless unless they have been competently, objectively, and honestly gathered, analyzed, and reported. As your career unfolds, you will inevitably face decisions with ethical implications. Before making such decisions, consider performing the following steps. First, define your alternative courses of action. Second, identify all of the parties that will be affected by your decision. Third, define how each course of action will favorably or unfavorably impact each affected party. Once you have a complete understanding of the decision context, seek guidance from external sources such as the IMA Statement of Ethical