

MANAGERIAL ACCOUNTING

FIFTH EDITION

John J. Wild

Ken W. Shaw

JOB ORDER COST ACCOUNTING

Cost Accounting System

Job Order Production

General Journal

Factory Overhead

Actual Costs Incurred

Overhead Applied

Overapplied Overhead

Cost of Goods Sold

By debiting Cost of goods sold, we increase the amount that had previously been undercharged.

1. 10.00 points

2. 10.00 points

Required:

(1) Identify whether the cost behavior in each graph is mixed, step-wise, fixed, variable, or curvilinear

Graph #1	Variable cost	✓
Graph #2	Fixed cost	✓
Graph #3	Variable cost	✗
Graph #4	Curvilinear cost	✓
Graph #5	Step-wise cost	✓

	March Concert Promotions	Ellis Home Builders
Actual indirect materials costs	\$ 22,000	\$ 12,500
Actual indirect labor costs	40,000	40,500
Other overhead costs	17,000	47,000
Overhead applied	88,200	105,200

Marsh Concert Promotions

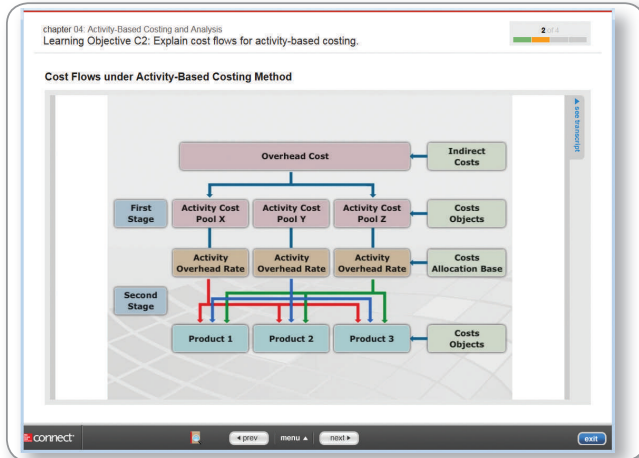
Determine whether overhead is overapplied or underapplied.

	Factory Overhead	
Indirect materials	22,000	88,200 Applied overhead
Indirect labor	40,000	
Other overhead costs	17,000	
		Overapplied overhead
		3,200





CONNECT FEATURES



Interactive Presentations

Interactive Presentations cover each chapter's core learning objectives with narrated, animated presentations that pause frequently to check for comprehension. Interactive Presentations harness the full power of technology to appeal to all learning styles. Interactive Presentations are a great way to improve online or hybrid sections, but also extend the learning opportunity for traditional classes, such as in facilitating a "flipped classroom."

Guided Examples

Guided Examples provide narrated and animated step-by-step walkthroughs of algorithmic versions of assigned exercises. This allows students to identify, review, or reinforce the concepts and activities covered in class. Guided Examples provide immediate feedback and focus on the areas where students need the most guidance.

Inventories	April 30	May 31	Activities and information for May:	
Raw materials	\$47,000	\$38,000	Raw materials purchases (paid with cash)	\$197,000
Goods in process	10,800	21,600	Factory payroll (paid with cash)	177,000
Finished goods	56,000	34,200	Factory overhead	
			Indirect materials	29,600
			Indirect labor	26,600
			Other overhead costs	41,600
			Sales (received in cash)	930,000
			Predetermined overhead rate based on direct labor cost	55%
Raw Materials (RM)				
RM - April 30	47,000			
RM Purch	197,000			
		29,600 Ind. mts.		
		176,400 DM used		
RM - May 31	38,000			
Goods in Process (GIP)				
GIP - April 30	10,800			
DM used	176,400			
DL used	150,400			
OH applied	82,720			
				398,720 CoIcGM
GIP - May 31	21,600			
Factory Payroll				
Factory Payroll	177,000			
		26,600 Ind. labor		
		150,400 DL used		
Factory Overhead				
Ind. mts.	29,600			
Ind. labor	26,600			
Other OH	41,600			
			82,720 OH applied	
Finished Goods (FG)				
FG - April 30	56,000			
CoIcGM	398,720			
FG - May 31	34,200			

2. value: 10.00 points

	Marsh Concert Promotions	Ellis Home Builders
Actual indirect materials costs	\$ 22,000	\$ 12,500
Actual indirect labor costs	46,000	46,500
Other overhead costs	17,000	47,000
Overhead applied	88,200	105,200

Marsh Concert Promotions

Determine whether overhead is overapplied or underapplied.

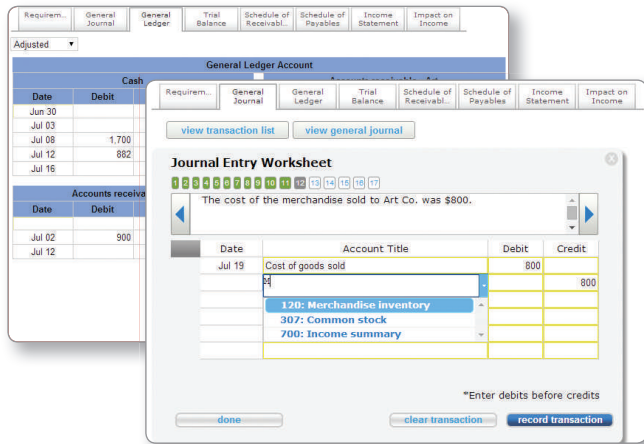
Factory Overhead			
Indirect materials	22,000	88,200	Applied overhead
Indirect labor	46,000		
Other overhead costs	17,000		
			Overapplied overhead
		3,200	

End-of-Chapter Material

McGraw-Hill Education redesigned the student interface for our end-of-chapter assessment content. The new interface provides improved answer acceptance to reduce students' frustration with formatting issues (such as rounding) and, for select questions, provides an expanded table that guides students through the process of solving the problem. Many questions have been redesigned to more fully test students' mastery of the content.

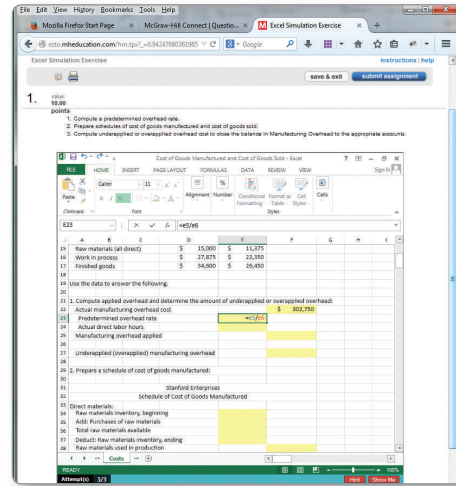
General Ledger

New to 5e are General Ledger problems that offer students the ability to see how transactions post from the general journal all the way through the financial statements. General Ledger (GL) questions provide auto-grading in the same intelligent design as our end-of-chapter content. Critical thinking and analysis components are added to each GL problem to ensure understanding of the entire process.



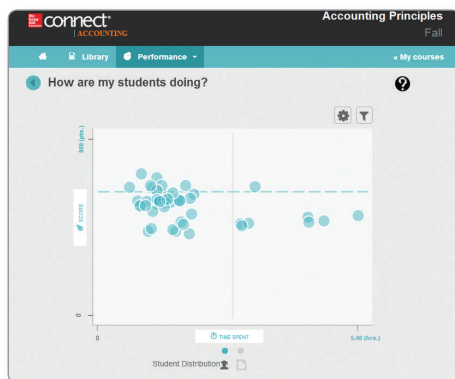
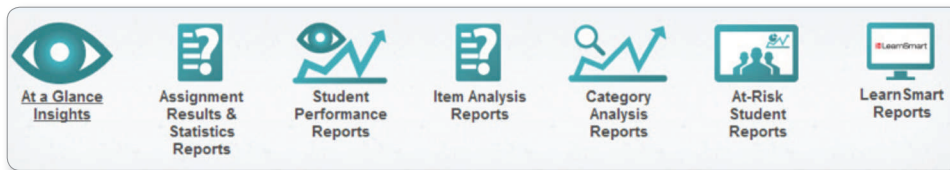
Excel Simulations

Assignable within Connect Accounting, Excel Simulations allow students to practice their Excel skills—such as basic formulas and formatting—within the context of accounting. These questions feature animated, narrated Help and Show Me tutorials (when enabled). These simulations are auto-graded and provide instant feedback to the student.



POWERFUL PERFORMANCE REPORTING

Connect generates comprehensive reports and graphs that provide instructors with an instant view of the performance of individual students, a specific section, or multiple sections. Since all content is mapped to learning objectives, Connect reporting is ideal for accreditation or other administrative documentation.



Connect Insight

The first and only analytics tool of its kind, Connect Insight is a series of visual data displays that are each framed by an intuitive question and provide at-a-glance information regarding how an instructor's class is performing. Connect Insight is available through Connect titles.

Managerial Accounting

5th
edition

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University of Wisconsin at Madison

Ken W. Shaw

University of Missouri at Columbia

**Mc
Graw
Hill**
Education



To my students and family, especially **Kimberly, Jonathan, Stephanie and Trevor.**
To my wife **Linda** and children **Erin, Emily and Jacob.**

MANAGERIAL ACCOUNTING, FIFTH EDITION

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Adapting to the Needs of Today's Students

Managerial Accounting, 5e

Enhancements in technology have changed how we live and learn. Working with learning resources across devices, whether smartphones, tablets, or laptop computers, empowers students to drive their own learning by putting increasingly intelligent technology into their hands.

Whether the goal is to become an accountant, a businessperson, or simply an informed consumer of accounting information, *Managerial Accounting (MA)* has helped generations of students succeed. Its leading-edge accounting content, paired with state-of-the-art technology, supports student learning and elevates understanding of key accounting principles.

MA excels at **engaging students** with content that will help them see the relevance of accounting. Its chapter-opening vignettes showcase dynamic, successful entrepreneurial individuals and companies and **highlight the usefulness of accounting to business owners**. This edition's featured companies—**Apple, Google, and Samsung**—capture student interest with their products, and their annual reports serve as a pathway for learning financial statements. New in this edition, **Need-to-Know** illustrations in each chapter demonstrate how to apply key accounting procedures. They are supported by guided video presentations.

MA also delivers innovative technology to help student performance. **Connect Accounting** provides students with a media-rich eBook version of the textbook and offers instant grading and feedback for assignments that are completed online. Our system for completing exercise and problem material takes accounting content to the next level, delivering assessment material in a **more intuitive, less restrictive** format that adapts to the needs of today's students.

This technology features:

- an **auto-calculation** feature that allows students to focus on concepts rather than rote tasks.
- a **smart (auto-fill) drop-down design**.
- a **general journal interface** that looks and feels more like that found in practice.

The end result is content that better prepares students for the real world.

Connect Accounting also includes digitally based, interactive, adaptive learning tools that provide an opportunity to

engage students more effectively by offering varied instructional methods and more personalized learning paths that build on different learning styles, interests, and abilities.

The revolutionary technology of the LearnSmart Advantage Series—consisting of **LearnSmart®** and **SmartBook®**—is available only from McGraw-Hill Education. These products are based on an intelligent learning system that uses a series of adaptive questions to pinpoint each student's knowledge gaps and then provides an optimal learning path. Students spend less time in areas they already know and more time in areas they don't. The result: Students study more efficiently, learn faster, and retain more knowledge. Valuable reports provide insights into how students are progressing through textbook content and information useful for shaping in-class time or assessment.

Interactive Presentations teach each chapter's core learning objectives in a rich, multimedia format, bringing the content to life. Your students will come to class prepared when you assign Interactive Presentations. Students can also review the Interactive Presentations as they study. Further, **Guided Examples** provide students with narrated, animated, step-by-step walk-throughs of algorithmic versions of assigned exercises. Students appreciate the Guided Examples, which help them learn accounting and complete assignments outside of class.

A **General Ledger (GL) application**, new to 5e, offers students the ability to see how transactions post from the general journal all the way through the financial statements. It uses the intuitive, less restrictive format used for other homework, and it adds critical thinking components to each GL question, to ensure understanding of the entire process.

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 about how your class is doing. Connect Insight provides a quick analysis on five key dimensions, available at a moment's notice from a tablet device: *How are my students doing? How is my section doing? How is this student doing? How are my assignments going?* and *How is this assignment going?*

"This is an excellent book that is well-written and contains excellent illustrations. It has the best online supplements of any of the texts that I have reviewed. . . . This is an excellent book that I would recommend to all of my colleagues."

—KAREN CRISONINO, County College of Morris

About the Authors



JOHN J. WILD is a distinguished professor of accounting at the University of Wisconsin at Madison. He previously held appointments at Michigan State University and the University of Manchester in England. He received his BBA, MS, and PhD from the University of Wisconsin.

Professor Wild teaches accounting courses at both the undergraduate and graduate levels. He has received numerous teaching honors, including the Mabel W. Chipman Excellence-in-Teaching Award, the departmental Excellence-in-Teaching Award, and the Teaching Excellence Award from the 2003 and 2005 business graduates at the University of Wisconsin. He also received the Beta Alpha Psi and Roland F. Salmonson Excellence-in-Teaching Award from Michigan State University. Professor Wild has received several research honors and is a past KPMG Peat Marwick National Fellow and is a recipient of fellowships from the American Accounting Association and the Ernst and Young Foundation.



KEN W. SHAW is an associate professor of accounting and the Deloitte Professor of Accounting at the University of Missouri. He previously was on the faculty at the University of Maryland at College Park. He has also taught in international programs at the University of Bergamo (Italy) and the University of Alicante (Spain). He received an accounting degree from Bradley University and an MBA and PhD from the University of Wisconsin. He is a Certified

Public Accountant with work experience in public accounting.

Professor Shaw teaches accounting at the undergraduate and graduate levels. He has received numerous School of Accountancy, College of Business and university-level teaching awards. He was voted the “Most Influential Professor” by three School of Accountancy graduating classes, and is a two-time recipient of the O’Brien Excellence in Teaching Award. He is the advisor to his school’s chapter of the Association of Certified Fraud Examiners.

Professor Wild is an active member of the American Accounting Association and its sections. He has served on several committees of these organizations, including the Outstanding Accounting Educator Award, Wildman Award, National Program Advisory, Publications, and Research Committees. Professor Wild is author of *Fundamental Accounting Principles*, *Financial Accounting*, *Financial and Managerial Accounting*, and *College Accounting*, each published by McGraw-Hill Education. His research articles on accounting and analysis appear in *The Accounting Review*; *Journal of Accounting Research*; *Journal of Accounting and Economics*; *Contemporary Accounting Research*; *Journal of Accounting, Auditing and Finance*; *Journal of Accounting and Public Policy*; and other journals. He is past associate editor of *Contemporary Accounting Research* and has served on several editorial boards including *The Accounting Review*. Professor Wild is a recognized expert in accounting and financial analysis, and is known for his teaching innovations within an active learning classroom environment.

In his leisure time, Professor Wild enjoys hiking, sports, travel, people, and spending time with family and friends.

Professor Shaw is an active member of the American Accounting Association and its sections. He has served on many committees of these organizations and presented his research papers at national and regional meetings. Professor Shaw’s research appears in the *Journal of Accounting Research*; *The Accounting Review*; *Contemporary Accounting Research*; *Journal of Financial and Quantitative Analysis*; *Journal of the American Taxation Association*; *Strategic Management Journal*; *Journal of Accounting, Auditing, and Finance*; *Journal of Financial Research*; and other journals. He has served on the editorial boards of *Issues in Accounting Education*; *Journal of Business Research*; and *Research in Accounting Regulation*. Professor Shaw is co-author of *Fundamental Accounting Principles*, *Financial and Managerial Accounting*, and *College Accounting*, all published by McGraw-Hill Education.

In his leisure time, Professor Shaw enjoys tennis, cycling, music, and coaching his children’s sports teams.

Dear Colleagues and Friends,

As we roll out the new edition of *Managerial Accounting*, we thank each of you who provided suggestions to improve the textbook and its teaching resources. This new edition reflects the advice and wisdom of many dedicated reviewers, symposium and workshop participants, students, and instructors. Throughout the revision process, we steered this textbook and its teaching tools in the manner you directed. As you'll find, the new edition offers a rich set of features—especially digital features—to improve student learning and assist instructor teaching and grading. We believe you and your students will like what you find in this new edition.

Many talented educators and professionals have worked hard to create the materials for this product, and for their efforts, we're grateful. **We extend a special thank-you to our contributing and technology supplement authors**, who have worked so diligently to support this product:

Contributing Author: Kathleen O'Donnell, *Onondaga Community College*

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Test Bank Contributors: Anna Boulware, *St. Charles Community College*, and Brenda J. McVey, *University of Mississippi*

Digital Contributor, Connect Content, General Ledger Problems, and Exercise PowerPoints: Kathleen O'Donnell, *Onondaga Community College*

In addition to the invaluable help from the colleagues listed above, we thank the entire *MA*, 5e, team at McGraw-Hill Education: Tim Vertovec, Steve Schuetz, Michelle Nolte, Lindsey Schauer, Lori Koettters, Ann Torbert, Brad Parkins, Patricia Plumb, Xin Lin, Kevin Moran, Debra Kubiak, Carol Bielski, Keri Johnson, DeAnna Dausener, Sarah Evertson, Ben Pearsall, Brian Nacik, Ron Nelms, and Daryl Horrocks. We could not have completed this new edition without your efforts.

John J. Wild Ken W. Shaw

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 they will need to know for success now and in the future. With *Connect Accounting*, instructors can easily deliver assignments, quizzes, and tests online. Students can review course material and practice important skills.

McGraw-Hill *Connect Accounting* provides all of the following learning and teaching resources:

- SmartBook, powered by LearnSmart
- Auto-graded online homework
- General ledger problems
- Auto-graded Excel simulations
- Interactive Presentations
- Guided Examples

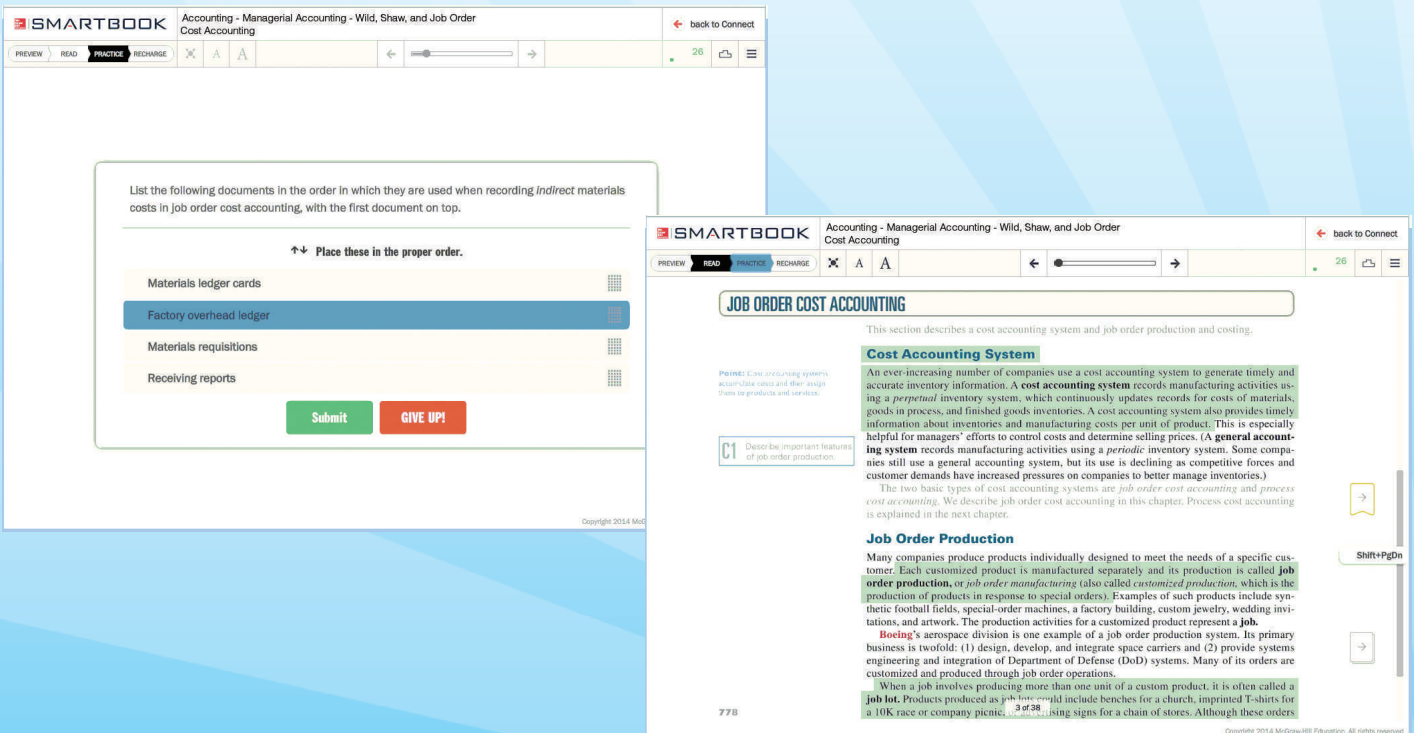
In short, *Connect Accounting* offers students powerful tools and features that optimize their time and energy, enabling them to focus on learning.

SmartBook, Powered by LearnSmart


SMARTBOOK[®] McGraw-Hill 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.

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.



The image displays two screenshots of the SmartBook interface. The left screenshot shows a 'Practice' screen with a list of documents to be ordered: Materials ledger cards, Factory overhead ledger, Materials requisitions, and Receiving reports. The right screenshot shows a 'Read' screen for 'JOB ORDER COST ACCOUNTING' with highlighted text and a 'GIVE UP!' button.

Tailored to You.

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 off-line. McGraw-Hill's redesigned student interface provides a real-world feel to interactive assignments and end-of-chapter assessment content. This robust accounting software allows for flexibility in learning styles and provides opportunities for courses to be delivered in traditional, online, and blended settings.

General Ledger Problems

New General Ledger problems for select questions enable students to see how transactions post from the general journal all the way through the financial statements. It provides a much-improved experience for students working with accounting cycle questions. Students' work in the general journal is automatically posted to the ledger, navigation is much simpler, scrolling is no longer an issue, and students can easily link back to their original entries simply by clicking the ledger if edits are needed. Many questions now have critical thinking components added, to maximize students' foundational knowledge of accounting concepts and principles.

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 at their own pace, with instant feedback.

Guided Examples

The Guided Examples in *Connect Accounting* provide a narrated, animated, step-by-step walk-through 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.

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 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.

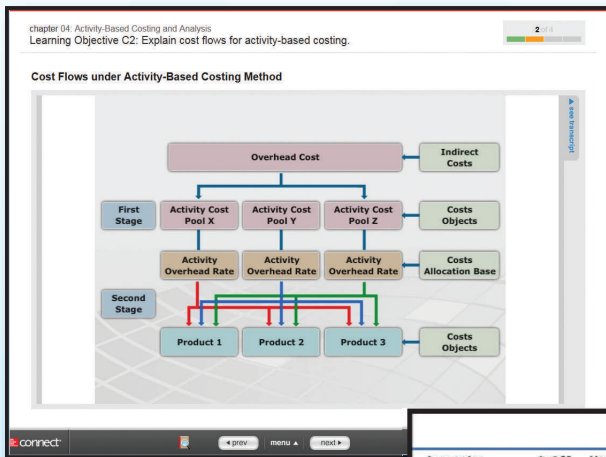
2. value: 10.00 points

	Marsh Concert Promotions	Ellis Home Builders	
Actual indirect materials costs	\$ 22,000	\$ 12,500	
Actual indirect labor costs	46,000	46,500	
Other overhead costs	17,000	47,000	
Overhead applied	88,200	105,200	

Marsh Concert Promotions

Determine whether overhead is overapplied or underapplied.

Factory Overhead			
Indirect materials	22,000	88,200	Applied overhead
Indirect labor	46,000		
Other overhead costs	17,000		
			Overapplied overhead
		3,200	



Excel Simulation Exercise

1. value: 10.00 points

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 account.

Use the data to answer the following:

	April	May
Raw materials (all direct)	\$ 15,000	\$ 11,975
Work in process	\$ 29,875	\$ 22,350
Finished goods	\$ 34,000	\$ 25,400

2. Prepare a schedule of cost of goods manufactured:

Standard Enterprises	
Schedule of Cost of Goods Manufactured	
Raw materials inventory, beginning	
Add: Purchases of raw materials	
Total raw materials available	
Product: Raw materials inventory, ending	
Raw materials used in production	

Inventories

	April 30	May 31
Raw materials	\$47,000	\$38,000
Goods in process	10,800	21,600
Finished goods	56,000	34,200

Activities and information for May:

Raw materials purchases (paid with cash)	\$197,000
Factory payroll (paid with cash)	177,000
Factory overhead	
Indirect materials	29,600
Indirect labor	26,600
Other overhead costs	41,600
Sales (received in cash)	\$300,000
Preetermined overhead rate based on direct labor cost	55%

Raw Materials (RM)

RM - April 30	47,000	
RM Purch	197,000	
	29,600	Ind. mtl.
	176,400	DM used
RM - May 31	38,000	

Goods in Process (GIP)

GIP - April 30	10,800	
DM used	176,400	
DL used	150,400	
OH applied	82,720	
	398,720	CoFGM
GIP - May 31	21,600	

Factory Payroll

Factory Payroll	177,000	
	26,600	Ind. labor
	150,400	DL used

Factory Overhead

Ind. mtl.	29,600	
Ind. labor	26,600	
Other OH	41,600	
	82,720	OH applied

3.07 / 4.00

McGraw-Hill **CONNECT ACCOUNTING** Features

Simple Assignment Management and Smart Grading

With *Connect Accounting*, creating assignments is easier than ever, enabling instructors to spend more time teaching and less time managing. Simple assignment management and smart grading allow you to:

- Create and deliver assignments easily with selectable end-of-chapter questions and Test Bank items.
- Have assignments scored automatically, giving students immediate feedback on their work and side-by-side comparisons with correct answers.
- Access and review each response, manually change grades, or leave comments for students to review.
- Reinforce classroom concepts with practice assignments and instant quizzes and exams.

Student	Total 710 pts	Chapter 2 Practice 150 pts	Chapter 2 Homework 50 pts	Chapter 2 Quiz 100 pts	Chapter 3 LearnSmart 100 pts
Adani, Nikki	691.65	145.50 (97.27 %)	49.23 (98.46 %)	100.00 (100.00 %)	100.00 (100.00 %)
Anglo, Mark	429.90	82.80 (55.20 %)	25.00 (50.00 %)	70.00 (70.00 %)	100.00 (100.00 %)
Banks, Gideon	601.92	131.60 (87.73 %)	21.22 (42.44 %)	90.00 (90.00 %)	100.00 (100.00 %)
Basa, Malik	697.60	148.00 (98.67 %)	50.00 (100.00 %)	100.00 (100.00 %)	100.00 (100.00 %)
Bell, George	524.30	102.50 (68.33 %)	35.00 (70.00 %)	70.00 (70.00 %)	100.00 (100.00 %)
Bhaisakhab, Janam	615.00	130.00 (86.67 %)	45.00 (90.00 %)	90.00 (90.00 %)	100.00 (100.00 %)
Binbaum, Bill	620.00	130.00 (86.67 %)	40.00 (80.00 %)	90.00 (90.00 %)	100.00 (100.00 %)
Brown, Daniel	640.71	135.00 (90.00 %)	44.71 (89.42 %)	100.00 (100.00 %)	100.00 (100.00 %)
Castaldo, Irene	610.00	130.00 (86.67 %)	40.00 (80.00 %)	80.00 (80.00 %)	100.00 (100.00 %)

Assignments	Score	Submitted	Date
Chapter 1 LearnSmart Total Value (Points): 100.00, Average Score: 1.00 (1.00%)	0.00 (0.00%)	10/14/15 12:28:44 EDT	10/14/15 12:28:44 EDT
Chapter 2 Practice Total Value (Points): 150.00, Average Score: 145.50 (97.00%)	145.50 (97.00%)	10/13/15 05:41:44 EDT	10/13/15 05:41:44 EDT
Chapter 2 Homework Total Value (Points): 50.00, Average Score: 49.23 (98.46%)	49.23 (98.46%)	10/13/15 05:44:48 EDT	10/13/15 05:44:48 EDT
Chapter 2 Quiz Total Value (Points): 100.00, Average Score: 100.00 (100.00%)	100.00 (100.00%)	10/13/15 08:15:44 EDT	10/13/15 08:15:44 EDT
Chapter 3 LearnSmart Total Value (Points): 100.00, Average Score: 100.00 (100.00%)	100.00 (100.00%)	10/13/15 08:15:44 EDT	10/13/15 08:15:44 EDT

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 progress-tracking function enables you to:

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

Connect Insight

The first and only analytics tool of its kind, McGraw-Hill Connect[®] Insight is a series of visual data displays—each framed by an intuitive question—to provide at-a-glance information about how your class is doing.

Connect Insight provides a quick analysis on five key insights, available at a moment's notice from your tablet device:

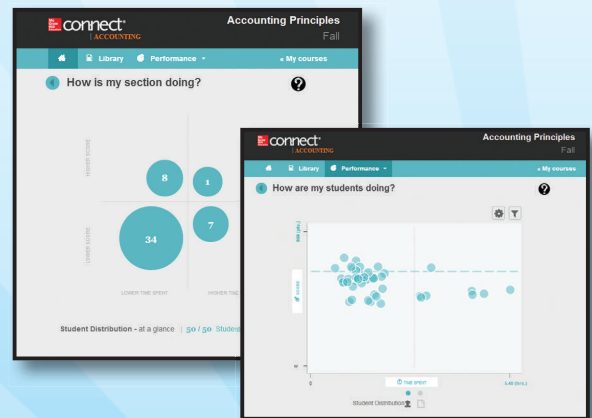
- How are my students doing?
- How are my assignments going?
- How is my section doing?
- How is this assignment going?
- How is this student doing?

Instructor Library

The *Connect Accounting* Instructor Library is a 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:

- Presentation slides.
- Animated PowerPoint exhibits and exercises.
- Solutions Manual.
- Test Bank.
- Instructor's Resource Manual.

The *Connect Accounting* Instructor Library also allows you to upload your own files.



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Innovative Textbook Features . . .

Using Accounting for Decisions

Whether we prepare, analyze, or apply accounting information, one skill remains essential: decision making. To help develop good decision-making habits and to illustrate the relevance of accounting, we use a pedagogical framework we call the Decision Center. This framework encompasses a variety of approaches and subject areas, giving students insight into every aspect of business decision making; see the four nearby examples for the different types of decision boxes, including those that relate to ethics. Answers to Decision Maker and Ethics boxes are at the end of each chapter.

Decision Analysis ■ ■ ■ **Setting Product Price**

A2 Determine product selling price based on total costs.


Relevant costs are useful to management in determining prices for special short-term decisions. But longer run pricing decisions of management need to cover both variable and fixed costs, and yield a profit. There are several methods to help management in setting prices. The *cost-plus* methods are probably the most common, where management adds a **markup** to cost to reach a target price. We will describe the **total cost method**, where management sets price equal to the product's total costs plus a desired profit on the product. This is a four-step process:

1. Determine total costs.

$$\text{Total costs} = \text{Production (direct materials, direct labor, and overhead) costs} + \text{Nonproduction (selling and administrative) costs}$$

Decision Insight

Make or Buy IT Companies apply make or buy decisions to their services. Many now outsource their information technology activities. Information technology companies provide infrastructure and services to enable businesses to focus on their key activities. It is argued that outsourcing saves money and streamlines operations, and without the headaches. ■



Decision Ethics

Production Manager You invite three friends to a restaurant. When the dinner check arrives, David, a self-employed entrepreneur, picks it up saying, "Here, let me pay. I'll deduct it as a business expense on my tax return." Denise, a salesperson, takes the check from David's hand and says, "I'll put this on my company's credit card. It won't cost us anything." Derek, a factory manager for a company, laughs and says, "Neither of you understands. I'll put this on my company's credit card and call it overhead on a cost-plus contract my company has with a client." (A *cost-plus contract* means the company receives its costs plus a percent of those costs.) Adds Derek, "That way, my company pays for dinner and makes a profit." Who should pay the bill? Why? ■ (Answers follow the chapter's Summary.)

Decision Maker

Partner You are a partner in a small accounting firm that specializes in keeping the books and preparing taxes for clients. A local restaurant is interested in obtaining these services from your firm. Identify factors that are relevant in deciding whether to accept the engagement. ■ (Answers follow the chapter's Summary.)

"Authors do a good job of relating material to real-life situations and putting students in the decision-maker role."

—MORGAN ROCKETT, Moberly Area Community College

Chapter Preview

Each chapter opens with a visual chapter preview. Students can begin their reading with a clear understanding of what they will learn and when, allowing them to stay more focused and organized along the way. Learning objective numbers highlight the location of related content.

Chapter Preview

DECENTRALIZATION	RESPONSIBILITY ACCOUNTING	PROFIT CENTERS	INVESTMENT CENTERS
<ul style="list-style-type: none"> Advantages Disadvantages Performance evaluation 	<ul style="list-style-type: none"> Controllable versus uncontrollable costs Responsibility accounting system P1 Responsibility accounting report 	<ul style="list-style-type: none"> C1 Direct and indirect expenses P2 Allocation of indirect expenses P3 Departmental income statements Departmental contribution to overhead 	<ul style="list-style-type: none"> A1 ROI and residual income A2 Margin and turnover A3 Nonfinancial performance measures A4 Cycle time C2 Transfer pricing C3 Joint costs allocation

Learning Objectives

CONCEPTUAL	ANALYTICAL	PROCEDURAL
<ul style="list-style-type: none"> C1 Distinguish between direct and indirect expenses and identify bases for allocating indirect expenses to departments. C2 Appendix 9A—Explain transfer pricing and methods to set transfer prices. C3 Appendix 9B—Describe allocation of joint costs across products. 	<ul style="list-style-type: none"> A1 Analyze investment centers using return on investment and residual income. A2 Analyze investment centers using profit margin and investment turnover. A3 Analyze investment centers using the balanced scorecard. A4 Compute cycle time and cycle efficiency, and explain their importance to production management. 	<ul style="list-style-type: none"> P1 Prepare a responsibility accounting report using controllable costs. P2 Allocate indirect expenses to departments. P3 Prepare departmental income statements and contribution reports.

CAP Model

The Conceptual/Analytical/Procedural (CAP) Model allows courses to be specially designed to meet the teaching needs of a diverse faculty. This model identifies learning objectives, textual materials, assignments, and test items by C, A, or P, allowing different instructors to teach from the same materials, yet easily customize their courses toward a conceptual, analytical, or procedural approach (or a combination thereof) based on personal preferences.

Bring Accounting to Life

NEED-TO-KNOW 2-5
Adjusting Overhead P4

A manufacturing company applied \$300,000 of overhead to its jobs during the year. For the independent scenarios below, prepare the journal entry to adjust over- or underapplied overhead. Assume the adjustment amounts are not material.

- Actual overhead costs incurred during the year equal \$305,000.
- Actual overhead costs incurred during the year equal \$298,500.

Solution


- | | | |
|---|-------|-------|
| Cost of Goods Sold | 5,000 | 5,000 |
| Factory Overhead | | |
| To close underapplied overhead to Cost of Goods Sold. | | |

Need-to-Know Illustrations


New in this edition are several Need-to-Know illustrations located at key junctures in each chapter. These illustrations pose questions about the material just presented—content that students “need to know” to successfully learn accounting. Accompanying solutions walk students through key procedures and analysis necessary to be successful with homework and test materials. Need-to-Know illustrations are supplemented with narrated, animated, step-by-step walk-through videos led by an instructor and available via *Connect*.

Global View

The Global View section explains international accounting practices relating to the material covered in that chapter. The aim of this section is to describe accounting practices and to identify the similarities and differences in international accounting practices versus those in the United States. As we move toward global convergence in accounting practices, and as we witness the likely convergence of U.S. GAAP to IFRS, the importance of student familiarity with international accounting grows. This innovative section helps us begin down that path. This section is purposefully located at the end of each chapter so that each instructor can decide what emphasis, if at all, is to be assigned to it.

 **GLOBAL VIEW**


Porsche AG manufactures high-performance cars. Each car is built according to individual customer specifications. Customers can use the Internet to place orders for their dream cars. Porsche employs just-in-time inventory techniques to ensure a flexible production process that can respond rapidly to customer orders. For a recent year, Porsche reported €33,781 million in costs of materials and €9,038 million in personnel costs, which helped generate €57,081 million in revenue.



Sean Gallup/Getty Images

Sustainability and Accounting Porsche's sustainability efforts extend beyond its manufacturing operations to event management. Each year when the company sponsors a professional tennis tournament, it uses a Porsche Cayenne Hybrid to shuttle players to and from the venue. In addition, the company sells event tickets that include public transportation, thus reducing the number of distinct journeys to the venue by about 30%. In addition, **Middleton Made Knives** applies sustainability through Quintin Middleton's choice of materials. The steel used for his knife blades can be recycled, and new trees can be planted to supply the wood for his knife blades.

Sustainability and Accounting **LSTN**, as introduced in this chapter's opening feature, places an emphasis on being a socially conscious and environmentally friendly alternative within the luxury headphone market. LSTN partners with The Starkey Hearing Foundation “to provide hearing for children in deaf schools,” explains Bridget Hilton, its founder. “Ninety-five percent of children in deaf schools worldwide can be helped . . . [and] eighty percent of those people live in developing countries.” LSTN also recognizes the need to work within the local markets so that its successes are sustainable. Our hearing products and services “will not undercut the local economies—these are basic senses that everyone on earth should be able to experience,” explains Bridget. “To me, success in business is doing something you love while being financially secure.” That is something we all hope is sustainable.



For every purchase, LSTN helps restore hearing to a person in need through the Starkey Hearing Foundation.

Courtesy of Bridget Hilton

Sustainability and Accounting

New in this edition are brief sections that highlight the importance of sustainability within the broader context of global accounting (and accountability). Companies increasingly address sustainability in their public reporting and consider the sustainability accounting standards (from the Sustainability Accounting Standards Board) and the expectations of our global society. These boxes, located near the end of the Global View section, cover different aspects of sustainability, often within the context of the chapter's featured entrepreneurial company.

“I like the layout of the text and the readability. The illustrations and comics in the book make the text seem less intimidating and boring for students. The PowerPoint slides are easy to understand and use, the pictorials are great, and the text has great coverage of accounting material. The addition of IFRS information and the updates to the opening stories are great. I like that the decision insights are about businesses the students can relate to (i.e., Facebook, women start-up businesses, etc.).”

—JEANNIE LIU, Chaffey College

Outstanding Assignment Material . . .

Once a student has finished reading the chapter, how well he or she retains the material can depend greatly on the questions, exercises, and problems that reinforce it. This book leads the way in comprehensive, accurate assignments.

Comprehensive Need-to-Know Problems present both a problem and a complete solution, allowing students to review the entire problem-solving process and achieve success.

Chapter Summaries provide students with a review organized by learning objectives. Chapter Summaries are a component of the CAP model (see page xii), which recaps each conceptual, analytical, and procedural objective.

NEED-TO-KNOW COMPREHENSIVE

The following information reflects Walczak Company's job order production activities for May.

Raw materials purchases	\$16,000
Factory payroll cost	15,400
Overhead costs incurred	
Indirect materials	5,000
Indirect labor	3,500
Other factory overhead	9,500

Walczak's predetermined overhead rate is 150% of direct labor cost. Costs are allocated to the three jobs worked on during May as follows.

	Job 401	Job 402	Job 403
Work in process inventory, April 30			
Direct materials	\$3,600		
Direct labor	1,700		
Applied overhead	2,550		
Costs during May			
Direct materials	3,550	\$3,500	\$1,400
Direct labor	5,100	6,000	800
Applied overhead	?	?	?
Status on May 31	Finished (sold)	Finished (unsold)	In process

Key Terms

Cost accounting system	Job order production	Receiving report
Finished Goods Inventory	Materials ledger card	Target cost
Job	Materials requisition	Time ticket
Job cost sheet	Overapplied overhead	Underapplied overhead
Job lot	Predetermined overhead rate	Work in Process Inventory
Job order costing system	Process operations	

Key Terms are bolded in the text and repeated at the end of the chapter. A complete glossary of key terms is available online through *Connect Accounting*.

Multiple Choice Quiz Answers at end of chapter

- A company's predetermined overhead allocation rate is 150% of its direct labor costs. How much overhead is applied to a job that requires total direct labor costs of \$30,000?
 - \$15,000
 - \$30,000
 - \$45,000
 - \$60,000
 - \$75,000
- A company's cost accounting system uses direct labor costs to apply overhead to work in process and finished goods inventories. Its production costs for the period are: direct materials, \$45,000; direct labor, \$35,000; and overhead applied, \$38,500. What is its predetermined overhead allocation rate?
 - 10%
 - 110%
 - 86%
 - 91%
 - 117%
- A company's cost of \$10,000 applied to these goods is \$4,000, and the predetermined overhead rate is 80% of direct labor costs, how much direct materials cost was incurred in producing these 500 units?
 - \$10,000
 - \$6,000
 - \$4,000
 - \$5,000
 - \$1,000
- A company's Work in Process Inventory T-account follows.

Work in Process Inventory	
Beginning balance	9,000
Direct materials	94,200
Direct labor	59,200
Overhead applied	31,600
Cost of goods manufactured	?

Multiple Choice Quiz questions quickly test chapter knowledge before a student moves on to complete Quick Studies, Exercises, and Problems.

QUICK STUDY Identify whether each description most likely applies to managerial or financial accounting.

- Its primary users are company managers.
- Its information is often available only after an audit is complete.
- Its primary focus is on the organization as a whole.
- Its principles and practices are very flexible.

QS 1-1 Managerial accounting versus financial accounting **CI**

Quick Study assignments are short exercises that often focus on one learning objective. Most are included in *Connect Accounting*. There are at least 10–15 Quick Study assignments per chapter.

Exercises are one of this book's many strengths and a competitive advantage. There are at least 10–15 per chapter, and most are included in *Connect Accounting*.

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Match each of the terms/phrases numbered 1 through 5 with the best definition on the right.

1. Cost accounting system	a. Production of products in response to customer orders.
2. Target cost	b. Production activities for a customized product.
3. Job lot	c. A system that records manufacturing costs using a perpetual inventory system.
4. Job	d. The expected selling price of a job minus its desired profit.
5. Job order production	e. Production of more than one unit of a custom product.

EXERCISES

Exercise 2-1 Job order production **CI**

PROBLEM SET A Jones Products manufactures derwater markers at \$6 in the table.

Problem 10-1A Analysis of income effects of additional business **A1**

\$384,000
96,000
288,000
120,000
96,000

rs approximately 300,000 units per month on and sale of this quantity follow.

PROBLEM SET B

Problem 10-1B Analysis of income effects of additional business **A1**

Problem Sets A & B are proven problems that can be assigned as homework or for in-class projects. All problems are coded according to the CAP model (see page xii), and Set A is included in *Connect Accounting*.

Helps Students Master Key Concepts

Beyond the Numbers exercises ask students to use accounting figures and understand their meaning. Students also learn how accounting applies to a variety of business situations. These creative and fun exercises are all new or updated and are divided into sections:

- Reporting in Action
- Comparative Analysis
- Ethics Challenge
- Communicating in Practice
- Taking It to the Net
- Teamwork in Action
- Hitting the Road
- Entrepreneurial Decision Practice
- Global Decision

Beyond the Numbers

BTN 9-1 Review Apple's income statement in Appendix A and identify its revenues for the years ended September 28, 2013, September 29, 2012, and September 24, 2011. For the year ended September 28, 2013, Apple reports the following product revenue mix. (Assume that its product revenue mix is the same for each of the three years reported when answering the requirements.)

iPhone	iPad and iPod	Mac	iTunes, Software and Services, and Accessories
53%	21%	13%	13%

Required

1. Compute the amount of revenue from each of its product lines for the years ended September 28, 2013, September 29, 2012, and September 24, 2011.
2. If Apple wishes to evaluate each of its product lines, how can it allocate its operating expenses to each of them to determine each product line's profitability?

(This serial problem began in Chapter 1 and continues through most of the book. If previous chapter segments were not completed, the serial problem can begin at this point. It is helpful, but not necessary, to use the Working Papers that accompany the book.)

SP 2 The computer workstation furniture manufacturing that Santana Rey started in January is progressing well. As of the end of June, Business Solutions's job cost sheets show the following total costs accumulated on three furniture jobs.

	Job 602	Job 603	Job 604
Direct materials	\$1,500	\$3,300	\$2,700
Direct labor	800	1,420	2,100
Overhead	400	710	1,050

Job 602 was started in production in May, and these costs were assigned to it in May: direct materials, \$600; direct labor, \$180; and overhead, \$90. Jobs 603 and 604 were started in June. Overhead cost is applied with a predetermined rate based on direct labor costs. Jobs 602 and 603 are finished in June, and Job 604 is expected to be finished in July. No raw materials are used indirectly in June. (Assume this company's predetermined overhead rate did not change over these months.)

Serial Problems use a continuous running case study to illustrate chapter concepts in a familiar context. The Serial Problem can be followed continuously from the first chapter or picked up at any later point in the book; enough information is provided to ensure students can get right to work.

"The serial problems are excellent. . . I like the continuation of the same problem to the next chapters if applicable. I use the Quick Studies as practice problems. . . Students have commented that this really works for them if they work (these questions) before attempting the assigned exercises and problems. I also like the discussion (questions) and make this an assignment. You have done an outstanding job presenting accounting to our students."

—JERRI TITTLE, Rose State College

General Ledger Problems New General Ledger problems enable students to see how transactions post. Students can track an amount in any financial statement all the way back to the original journal entry. Critical thinking components then challenge students to analyze the business activities in the problem.

The **General Ledger** tool in *Connect* automates several of the procedural steps in accounting so that the financial professional can focus on the impacts of each transaction on various reports and performance measures.

GL 2-1 General Ledger assignment GL 2-1, based on Problem 2-1A, focuses on transactions related to job-order costing. Prepare summary journal entries to record the cost of jobs and their flow through the manufacturing environment. Then prepare a schedule of cost of goods manufactured and a partial income statement.

The End of the Chapter Is Only the Beginning Our valuable and proven assignments aren't just confined to the book. From problems that require technological solutions to materials found exclusively online, this book's end-of-chapter material is fully integrated with its technology package.

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ACCOUNTING

- Quick Studies, Exercises, and Problems available in *Connect* are marked with an icon.
- Assignments that focus on global accounting practices and companies are identified with an icon.
- Assignments that involve decision analysis are identified with an icon.

Content Revisions Enhance Learning

This edition's revisions are driven by feedback from instructors and students.

- Many new, revised, and updated assignments throughout, including serial problem and entrepreneurial assignments.
- New Need-to-Know illustrations added to each chapter at key junctures to reinforce key topics.
- New Sustainability section for each chapter, with examples linked to the company featured in the chapter opener.
- New annual reports and comparison assignments: **Apple**, **Google**, and **Samsung**.
- New streamlined opening layout for each chapter.
- Revised art program, visual infographics, and text layout.
- Updated ratio/tool analysis, using data from well-known firms.
- New General Ledger questions added to most chapters.
- New and revised entrepreneurial examples and elements.
- New technology content integrated and referenced in the book.
- Revised terminology from *goods in process* to *work in process*.
- Changed the title of *Manufacturing Statement* to *Schedule of Cost of Goods Manufactured* due to its use in practice.

Chapter 1

SunSaluter NEW opener.

Revised discussions of the purpose of managerial accounting and cost classifications and their uses.

Reduced number of cost classifications from five to three.

Revised exhibit and example of direct vs. indirect costs.

Added new exhibit comparing the balance sheet and income statement for different types of companies.

Reduced level of detail in exhibit on income statement reporting.

Revised discussion of the flow of manufacturing costs.

New four-step process to illustrate the schedule of cost of goods manufactured (COGM).

Added T-accounts to show the flow of costs for the COGM.

Added a third column to the schedule of COGM, for enhanced presentation.

Simplified exhibit on cost flows across the financial statements.

New discussion of corporate social responsibility.

Added 6 Quick Studies and 4 Exercises.

Added new discussion and presentation of journal entries for indirect materials and indirect labor.

Added new exhibit showing calculations for overhead applied to individual jobs.

Added new exhibit on the flow of costs to general ledger accounts, the manufacturing statement, and the financial statements.

Added new schedule of cost of goods manufactured exhibit.

Added 2 Quick Studies and 2 Exercises.

Chapter 3

Kar's Nuts NEW opener.

Major change: Revised the overview exhibit of process operations and expanded the illustration to show *two departments*.

Major change: Combined coverage of direct labor and overhead into *conversion costs*.

Revised exhibits/examples to show fewer processes and simpler, more engaging products (tennis balls and trail mix).

Added discussion, with journal entries, of transfers of costs across departments.

Added discussion of multiple work in process (WIP) inventory accounts.

Revised discussion of job order vs. process costing.

Revised discussion, with new exhibit, on computation of equivalent units.

Added conversion costs per unit to equivalent units discussion.

Added a section differentiating the weighted-average and FIFO methods.

New exhibit showing units transferred out and units remaining in ending work in process inventory.

Added formula for computing equivalent units under the weighted-average method.

Moved discussion of journal entries to later in the chapter.

Revised the process costing summary report to focus on direct materials and conversion costs.

Revised journal entries to show two WIP Inventory accounts and to eliminate the Factory Payroll account.

Added discussion of Volkswagen's use of robotics in process operations.

Revised and added Comprehensive Need-to-Knows to reflect changes in chapter (including *two processes*).

New exhibits showing transfer of units and costs across departments, using T-accounts.

In the FIFO method appendix:

- Added discussion of differences between FIFO and weighted-average approaches to computing equivalent units.
- Added exhibits on computing equivalent units and cost per equivalent unit under FIFO.
- Revised discussion of applying four-step process using FIFO.

Added 16 Quick Studies and 7 Exercises.

Chapter 4

Suja Juice Company NEW opener.

Clarified departmental overhead rate method and ABC methods as four-step processes.

Re-graded heading levels to highlight plantwide and departmental overhead rate method topics.

Expanded discussion of examples used in the ABC application, to enhance clarity.

Revised Exhibit 4.16, separating Costs of Good Quality from Costs of Poor Quality, thus highlighting the Cost of Quality Report.

4 new Quick Studies, and some old Quick Studies repurposed to Exercises.

Chapter 5

Fast Yeti Custom Tees NEW opener.

Revised discussion of fixed and variable costs. Revised discussion of *relevant range*.

Reorganized discussion of the high-low method as a three-step process.

Enhanced exhibit on high-low method.

Revised discussion of how changes in estimates affect break-even points.

Revised *target income* discussion to focus on pretax income.

Simplified exhibit on using the contribution margin income statement to compute sales needed for target income.

Revised discussion of sensitivity analyses, with examples of buying a new machine or increasing advertising.

Added exhibit on using the contribution margin income statement in sensitivity analysis.

Chapter 2

Middleton Made Knives NEW opener.

New discussion of differences between job order and process operations.

Moved discussion of job order costing for services to later in chapter.

Revised/simplified discussions of cost flows and job cost sheets.

Simplified journal entries for labor costs.

New exhibits to show postings of product cost journal entries to general ledger accounts and to job cost sheets.

Revised exhibits on materials and labor cost flows.

Revised text and new exhibit on four-step process to record overhead.

Revised discussion of applying overhead and recording actual overhead.

Eliminated the *weighted-average contribution margin* method of computing multiproduct break-even.

Added two exhibits on calculations of *operating leverage*.

Added appendix on variable costing.

Added 5 Quick Studies and 6 Exercises.

Chapter 6

Happy Family Brands UPDATED opener.

Added new discussion of the three-step process to determine product selling price in the “Setting Prices” section.

Added short section on sources of data for CVP Analysis when preparing income statement under variable costing versus absorption costing.

Replaced previous break-even Decision Analysis example with special-order using IceAge Company.

3 new Quick Studies and 4 new Exercises.

Chapter 7

Solben NEW opener.

Major change: Uses a *manufacturing company* as the example within the chapter.

Budgeting for a *merchandising company* now appears in the chapter-end appendix.

Shortened/tightened section on budget process and administration.

Added section on the benefits of budgeting.

New section on the master budget differences between manufacturers and merchandisers.

Revised exhibit on the sequence of preparing the master budget for a *manufacturer*.

Reformatted sales budget exhibit.

Streamlined and reformatted several exhibits in Excel format.

Rewrote sections on preparing the direct materials, direct labor, and factory overhead budgets.

Clarified explanation of capital expenditures budget.

Slightly expanded section on preparation of the cash budget.

Added section on using the master budget.

In appendix, added new exhibit on the master budget sequence for a merchandiser.

Added 5 Quick Studies and 6 Exercises.

Chapter 8

Niner Bikes NEW opener.

Revised discussions of fixed and flexible budget performance reports.

Revised several flexible budget exhibits.

Revised discussion of setting standard costs.

Revised discussion of computing and analyzing cost variances.

Revised exhibits on computing direct materials and direct labor variances.

Revised sections on analyzing materials, labor, and overhead variances.

Simplified discussion of setting overhead standards.

Revised discussion of computing the predetermined overhead rate.

Revised exhibits on overhead variances and overhead variance report.

Revised discussion of sales variances in Decision Analysis.

Added learning objective for overhead spending and efficiency variances (in appendix).

In the appendix, added discussion, with an exhibit, on the standard costing income statement.

Added 7 Exercises.

Chapter 9

United by Blue UPDATED opener.

Added discussion of advantages and disadvantages of decentralization.

Reorganized discussion of cost, profit, and investment centers into a bulleted list, with examples using Kraft Foods Group.

Revised discussion and exhibit of responsibility accounting for cost centers.

Streamlined and clarified discussion and exhibits in the allocation of indirect expenses example.

Added discussion of the usefulness of departmental income statements in decision making.

Revised discussion of the use of return on investment and residual income in decision making.

Revised example of profit margin and investment turnover calculations, using Walt Disney Company

Added 3 Quick Studies, 5 Exercises, and 1 Problem.

Chapter 10

Charlie’s Brownies UPDATED opener.

Expanded discussion and exhibits for short-term decisions, including additional business, make or buy, scrap or rework, sell or process further, sales mix, and segment elimination.

Added a Need-to-Know illustration for each short-term decision.

New Global View on segment elimination.

Added 3 Quick Studies.

Chapter 11

Adafruit Industries NEW opener.

Revised separate discussions of the accounting rate of return, net present value, and internal rate of return.

Updated graphic showing cost of capital estimates by industry.

Revised discussion of profitability index, with new exhibit.

Added 7 Quick Studies and 6 Exercises.

Chapter 12

LSTN NEW opener.

New infographics for operating, investing, and financing activities.

New linkage of cash flow classifications to balance sheet.

Simplified discussion of noncash investing and financing.

New, simplified preparation steps for statement of cash flows.

New, overall summary T-account for preparing statement of cash flows.

New reconstruction entries to help determine cash.

Updated cash flow analysis using Nike.

Several new Quick Studies and revised Exercises and Problems.

Chapter 13

Motley Fool REVISED opener.

New companies—Apple, Google, and Samsung—throughout the text and exhibits.

New boxed discussion of the role of financial statement analysis to fight and prevent fraud.

Enhanced horizontal and vertical ratio analysis using new companies and industry data.

New analysis for segment data.

Appendix C

New layout showing financial statements drawn from trial balance.

New preliminary coverage of classified and unclassified balance sheets.

Changed selected numbers for FastForward.

Revised Piaggio’s (IFRS) balance sheet.

Updated debt ratio section using Skechers.

Appendix D

New LLC example using STARZ.

New T-accounts to enhance learning of partnership capital.

Instructor Resources

Connect is your all-in-one location for a variety of instructor resources. You can create custom presentations from your own materials and access all of the following. Here's what you'll find there:

- **Instructor's Resource Manual**

Written by April Mohr, Jefferson Community and Technical College, SW.

This manual contains (for each chapter) a Lecture Outline, a chart linking all assignment materials to learning objectives, and additional visuals with transparency masters.

- **Solutions Manual**

Written by John J. Wild, University of Wisconsin–Madison, and Ken W. Shaw, University of Missouri–Columbia.

- **Test Bank, Computerized Test Bank**

Revised by James Racic, Lakeland Community College

- **PowerPoint® Presentations**

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Managerial Accounting

1 chapter

Managerial Accounting Concepts and Principles

Chapter Preview

MANAGERIAL ACCOUNTING BASICS

- C1** Purpose of managerial accounting
- Nature of managerial accounting
- Managerial decisions
- Fraud and ethics in managerial accounting

MANAGERIAL COST CONCEPTS

- C2** Types of cost classifications
- C3** Identification of cost classifications
- Cost concepts for service companies

REPORTING

- C4** Manufacturer costs
 - Balance sheet
- P1** Income statement
- C5** Flow of activities
- P2** Schedule of cost of goods manufactured
- C6** Managerial accounting trends
- A1** Inventory analysis

Learning Objectives

CONCEPTUAL

- C1** Explain the purpose and nature of, and the role of ethics in, managerial accounting.
- C2** Describe accounting concepts useful in classifying costs.
- C3** Define product and period costs and explain how they impact financial statements.

- C4** Explain how balance sheets and income statements for manufacturing, merchandising, and service companies differ.
- C5** Explain manufacturing activities and the flow of manufacturing costs.
- C6** Describe trends in managerial accounting.

ANALYTICAL

- A1** Assess raw materials inventory management using raw materials inventory turnover and days' sales in raw materials inventory.

PROCEDURAL

- P1** Compute cost of goods sold for a manufacturer and for a merchandiser.
- P2** Prepare a schedule of cost of goods manufactured and explain its purpose and links to financial statements.



Follow the Sun

CALGARY, CANADA—As a child, Eden Full experimented with solar electricity, starting with a desktop solar car she built from a kit as a 10-year-old. In high school, Eden tinkered with how to arrange solar panels to generate the most electricity. “I found that to get the most electricity, you have to face your solar panels toward the sun,” says Eden. Thus was born the SunSaluter, Eden’s invention that uses a water filtration system to automatically rotate solar panels to follow the sun’s path each day.

Like most successful entrepreneurs, Eden is finding success by creating a niche. While solar tracking is not a novel idea, Eden notes that “solar trackers can be expensive, many require electricity, and they often involve complex mechanisms prone to failure. A lot of technologies fail simply because they are too complicated.” Because Eden’s product does not use electricity, and it creates clean filtered water while it also produces solar electricity, its use has great potential benefit in developing countries. “When I realized I could invent a technology for social good, I fell in love with tinkering with something that mattered,” she says.

With her product and a desire to change the world, Eden started her company, **SunSaluter**. Though still small, her company generates enough revenue to cover its costs. Eden

stresses it is good to start a business when one is young. Risk is low, and “if the owners are passionate about their idea, someone will provide financing.” In addition to passion and seed money, aspiring entrepreneurs need to understand basic managerial principles, cost classifications, and cost flows. Managerial accounting information enables Eden to plan and control costs and make good decisions. But, as Eden notes, “innovators must execute what they plan to do,” and information on costs can help owners see if their plans are working.

Eden notes that it took her a while to “understand how to develop a realistic product with market potential.” While financial success ultimately rests on monitoring and controlling operations, Eden measures success by more than just profits. “Anything that provides economic value should have a positive social impact,” claims Eden. “You have to think about long-term returns.” Eden offers sound advice for aspiring entrepreneurs: “Find your passion. But, no matter what your dream is, there will be tough days. Don’t give up.” And, of course, follow the sun.

“If it’s beneficial and sustainable, you have to keep pushing”

—Eden Full

Sources: SunSaluter website, January 2015; *Conscious Magazine*; *Entrepreneur.com*, April 18, 2013; *Carbon Talks*, www.carbontalks.ca/innovator-profile/eden-full; *EnergyMatters.com*, June 10, 2011; NPR, December 2012

MANAGERIAL ACCOUNTING BASICS

Managerial accounting is an activity that provides financial and nonfinancial information to an organization's managers. Managers include, for example, employees in charge of a company's divisions; the heads of marketing, information technology, and human resources; and top-level managers such as the chief executive officer (CEO) and chief financial officer (CFO). To do their jobs, such managers need more than just the general-purpose financial statements provided by the financial accounting system. This section explains the purpose of managerial accounting (also called *management accounting*) and compares it with financial accounting.

Purpose of Managerial Accounting

C1

Explain the purpose and nature of, and the role of ethics in, managerial accounting.

The purpose of managerial accounting is to provide useful information to managers of an organization. Managerial accounting helps managers with three key tasks: (1) determining the costs of an organization's products and services, (2) planning future activities, and (3) comparing actual results to planned results. For example, managerial accounting information can help the marketing manager decide whether to advertise on social media such as **Twitter**; it also can help the information technology manager decide whether to buy new computers. Managerial accounting information also helps the CEO decide which divisions to expand and which to eliminate.

Point: Costs are important to managers because they impact both the financial position and profitability of a business. Managerial accounting assists in analysis, planning, and control of costs.

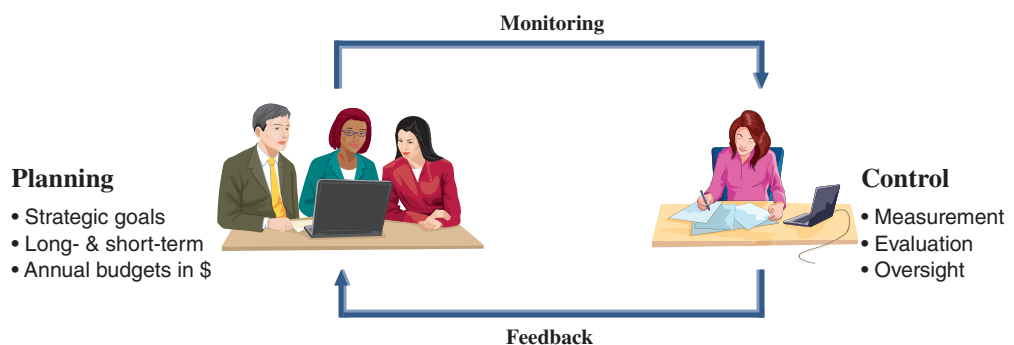
The remainder of this book looks carefully at how managerial accounting information is gathered and how managers use it. We begin by showing how the managerial accounting system collects cost information and assigns it to an organization's products and services. Information about such costs is important for many decisions that managers make, such as predicting the future costs of a product or service. Predicted costs are used in product pricing, profitability analysis, and in deciding whether to make or buy a product or component. More generally, much of managerial accounting involves gathering information about costs for planning and control decisions.

Planning is the process of setting goals and making plans to achieve them. Companies make long-term strategic plans that usually span a 5- to 10-year horizon. Strategic plans usually set a firm's long-term direction based on opportunities such as new products, new markets, and capital investments. A strategic plan's goals and objectives are broadly defined given its long-term orientation. With long-term plans in place, companies then set short-term plans, which are more operational in nature. Short-term plans translate the strategic plan into actions, and they are more concrete and consist of better-defined objectives and goals. A short-term plan often covers a one-year period that, when translated in monetary terms, is known as a budget.

Control is the process of monitoring planning decisions and evaluating an organization's activities and employees. It includes the measurement and evaluation of actions, processes, and outcomes. Feedback provided by the control function allows managers to revise their plans. Measurement of actions and processes also allows managers to take corrective actions to obtain better outcomes. For example, managers periodically compare actual results with planned results. Exhibit 1.1 portrays the important management functions of planning and control. In later chapters, we explain how managers also use this information to direct and improve business operations.

EXHIBIT 1.1

Planning and Control
(including monitoring and feedback)



Nature of Managerial Accounting

Managerial accounting differs from financial accounting. We discuss seven key differences in this section, as summarized in Exhibit 1.2.



EXHIBIT 1.2

Key Differences between Managerial Accounting and Financial Accounting

	Financial Accounting	Managerial Accounting
1. Users	External: Investors, creditors, and others outside of the managers of the organization	Internal: Managers, employees, and decision makers inside the organization
2. Purpose of information	Help external users make investment, credit, and other decisions	Help managers make planning and control decisions
3. Flexibility of reporting	Structured and often controlled by GAAP	Relatively flexible (no GAAP constraints)
4. Timeliness of information	Often available only after an audit is complete	Available quickly without the need to wait for an audit
5. Time dimension	The past; historical information with some predictions	The future; many projections and estimates, with some historical information
6. Focus of information	The whole organization	An organization's projects, processes, and divisions
7. Nature of information	Monetary information	Mostly monetary; but also nonmonetary information

Users and Decision Makers Companies accumulate, process, and report financial accounting and managerial accounting information for different groups of decision makers. Financial accounting information is provided primarily to external users including investors, creditors, analysts, and regulators. External users rarely have a major role in managing a company's daily activities. Managerial accounting information, in contrast, is provided primarily to internal users who are responsible for making and implementing decisions about a company's business activities.

Point: It is desirable to accumulate certain information for management reports in a database separate from financial accounting records.

Purpose of Information Investors, creditors, and other external users of financial accounting information must often decide whether to invest in or lend to a company. If they have already done so, they must decide whether to continue owning the company or carrying the loan. Internal decision makers must plan a company's future. They seek to take advantage of opportunities or to overcome obstacles. They also try to control activities. Managerial accounting information helps internal users make both planning and control decisions.

Flexibility of Practice External users compare companies by using financial reports, and they need protection against false or misleading information. Thus, financial accounting relies on accepted principles that are enforced through an extensive set of rules and guidelines, or GAAP. Internal users need managerial accounting information for planning and controlling their company's activities rather than for external comparisons. Internal users require different types of information, depending on the activity and the type of organization. Thus, managerial accounting systems are flexible and differ across companies. The design of a company's managerial accounting system depends largely on the nature of the business and the arrangement of its internal operations. Managers can decide for themselves what information they want and how they want it reported. Even within a single company, different managers often design their own systems to meet their special needs. The important question a manager must ask is whether the information being collected and reported is useful for planning, decision making, and control purposes.

Point: The Institute of Management Accountants issues statements that govern the practice of managerial accounting. Accountants who pass a qualifying exam are awarded the CMA.

Point: Financial statements are usually issued several weeks after the period-end. GAAP requires the reporting of important events that occur while the statements are being prepared. These events are called *subsequent events*.

Timeliness of Information Formal financial statements reporting past transactions and events are not immediately available to outside parties. Independent certified public accountants often must *audit* a company's financial statements before providing them to external users. Thus, because audits often take several weeks to complete, financial reports to outsiders usually are not available until well after the period-end. However, managers can quickly obtain managerial accounting information. External auditors need not review it. Estimates and projections are acceptable. To get information quickly, managers often accept less precision in reports. As an example, an early internal report to management prepared right after the year-end could report net income for the year between \$4.2 and \$4.8 million. An audited income statement could later show net income for the year at \$4.6 million. The internal report is not precise, but its information can be more useful because it is available earlier.

Internal auditing plays an important role in managerial accounting. Internal auditors evaluate the flow of information not only inside but also outside the company. Managers are responsible for preventing and detecting fraudulent activities in their companies.

Time Dimension To protect external users from false expectations, financial reports deal primarily with results of both past activities and current conditions. While some predictions such as service lives and salvage values of plant assets are necessary, financial accounting avoids predictions whenever possible. In contrast, managerial accounting regularly includes predictions of conditions and events. As an example, one important managerial accounting report is a budget, which predicts revenues, expenses, and other items. If managerial accounting reports were restricted to the past and present, managers would be less able to plan activities and less effective in managing and evaluating current activities.

EXHIBIT 1.3

Focus of External Reports



Reports to external users focus on company as a whole

Focus of Information Companies often organize into divisions and departments, but investors rarely can buy shares in one division or department. Nor do creditors lend money to a company's single division or department. Instead, they own shares in or make loans to the entire company. Financial accounting focuses primarily on a company as a whole as depicted in Exhibit 1.3.

The focus of managerial accounting is different. While top-level managers are responsible for managing the whole company, most other managers are responsible for much smaller sets of activities. These middle-level and lower-level managers need managerial accounting reports dealing with specific activities, projects, and subdivisions for which they are responsible. For instance, division sales managers are directly responsible only for the results achieved in their divisions. Accordingly, to improve performance, they need only information about results achieved in their own divisions. This information includes the level of success achieved by each individual, product, or department in each division of the whole company as depicted in Exhibit 1.4.

EXHIBIT 1.4

Focus of Internal Reports



Reports to internal users focus on company units and divisions

Nature of Information Both financial and managerial accounting systems report monetary information. Managerial accounting systems also report considerable nonmonetary information. Monetary information is an important part of managerial decisions, and nonmonetary information also plays a crucial role, especially when monetary effects are difficult to measure. Common examples of nonmonetary information include customer and employee satisfaction data, the percentage of on-time deliveries, and product defect rates.

Managerial Decision Making

Although there are differences between financial and managerial accounting, the two are not entirely separate. Some similar information is useful to both external and internal users. For instance, information about costs of manufacturing products is useful to all users in making decisions. Also, both financial and managerial accounting affect people's actions. For example, **Trek's** sales compensation plan affects the behavior of its salesforce when selling its



James Startt/Agence Zoom/Getty Images

manufactured bikes. Trek also must estimate the effects of promotions on buying patterns of customers. These estimates impact the equipment purchase decisions for manufacturing and can affect the supplier selection criteria established by purchasing. Thus, financial and managerial accounting systems do more than measure; they also affect people's decisions and actions.

Fraud and Ethics in Managerial Accounting

Fraud, and the role of ethics in reducing fraud, are important factors in running business operations. Fraud involves the use of one's job for personal gain through the deliberate misuse of the employer's assets. Examples include theft of the employer's cash or other assets, overstating reimbursable expenses, payroll schemes, and financial statement fraud. Three factors must exist for a person to commit fraud: opportunity, financial pressure, and rationalization. This is known as the *fraud triangle*. Fraud affects all business and it is costly: A 2014 *Report to the Nation* from the Association of Certified Fraud Examiners (ACFE) estimates the average U.S. business loses 5% of its annual revenues to fraud.

The most common type of fraud, where employees steal or misuse the employer's resources, results in an average loss of \$130,000 per occurrence. For example, in a billing fraud, an employee sets up a bogus supplier. The employee then prepares bills from the supplier and pays these bills from the employer's checking account. The employee cashes the checks sent to the bogus supplier and uses them for his or her own personal benefit. An organization's best chance to minimize fraud is through reducing opportunities for employees to commit fraud.



Implications for Managerial Accounting Fraud increases a business's costs, and an important goal of managerial accounting is accurate cost information. Left undetected, inflated costs can result in poor pricing decisions, an improper product mix, and faulty performance evaluations. All of these can lead to poor financial results for the company. Management can develop accounting systems to closely track costs and identify deviations from expected amounts. In addition, managers rely on an **internal control system** to monitor and control business activities. An internal control system is the policies and procedures managers use to:

- Ensure reliable accounting.
- Urge adherence to company policies.
- Protect assets.
- Promote efficient operations.

Combating fraud and other dilemmas requires ethics in accounting. **Ethics** are beliefs that distinguish right from wrong. They are accepted standards of good and bad behavior. Identifying the ethical path can be difficult. The **Institute of Management Accountants (IMA)**, the professional association for management accountants, has issued a code of ethics to help accountants involved in solving ethical dilemmas. The IMA's Statement of Ethical Professional Practice requires that management accountants be competent, maintain confidentiality, act with integrity, and communicate information in a fair and credible manner.

The IMA provides a "road map" for resolving ethical conflicts. It suggests that an employee follow the company's policies on how to resolve such conflicts. If the conflict remains unresolved, an employee should contact the next level of management (such as the immediate supervisor) who is not involved in the ethical conflict.

Point: The IMA also issues the Certified Management Accountant (CMA) and the Certified Financial Manager (CFM) certifications. Employees with the CMA or CFM certifications typically earn higher salaries than those without.

Point: The Sarbanes-Oxley Act requires each issuer of securities to disclose whether it has adopted a code of ethics for its senior officers and the content of that code.

Decision Ethics



Production Manager You invite three friends to a restaurant. When the dinner check arrives, David, a self-employed entrepreneur, picks it up saying, "Here, let me pay. I'll deduct it as a business expense on my tax return." Denise, a salesperson, takes the check from David's hand and says, "I'll put this on my company's credit card. It won't cost us anything." Derek, a factory manager for a company, laughs and says, "Neither of you understands. I'll put this on my company's credit card and call it overhead on a cost-plus contract my company has with a client." (*A cost-plus contract means the company receives its costs plus a percent of those costs.*) Adds Derek, "That way, my company pays for dinner *and* makes a profit." Who should pay the bill? Why? ■ [Answers follow the chapter's Summary.]

MANAGERIAL COST CONCEPTS

C2

Describe accounting concepts useful in classifying costs.

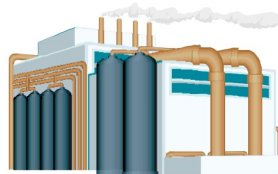
Because managers use costs for many different purposes, organizations classify costs in different ways (that is, different costs for different purposes). This section explains common ways to classify costs and links them to managerial decisions. We illustrate these cost classifications with Rocky Mountain Bikes, a manufacturer of bicycles.

Types of Cost Classifications

Fixed versus Variable At a basic level, a cost can be classified by how it behaves with changes in the volume of activity. Thus, a cost can be classified as fixed or variable. A **fixed cost** does not change with changes in the volume of activity (within a range of activity known as an activity's *relevant range*). For example, straight-line depreciation on equipment is a fixed cost. A **variable cost** changes in proportion to changes in the volume of activity. Sales commissions computed as a percent of sales revenue are variable costs. Additional examples of fixed and variable costs for a bike manufacturer are provided in Exhibit 1.5. Classification of costs as fixed or variable is helpful in cost-volume-profit analyses and short-term decision making. We discuss these in Chapters 5 and 11.

EXHIBIT 1.5

Fixed and Variable Costs



Fixed Cost: Rent for Rocky Mountain Bikes' building is \$22,000, and it doesn't change with the number of bikes produced.



Variable Cost: Cost of bicycle tires is variable with the number of bikes produced—this cost is \$15 per pair.

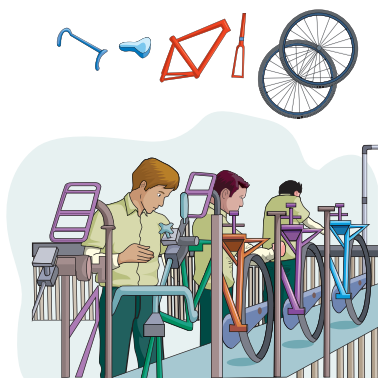
Direct versus Indirect A cost is often traced to a **cost object**, which is a product, process, department, or customer to which costs are assigned. **Direct costs** are traceable to a single cost object. **Indirect costs** cannot be easily and cost-beneficially traced to a single cost object. Assuming the cost object is a bicycle, Rocky Mountain Bikes will first identify the costs that can be directly traced to bicycles. The direct costs traceable to a bicycle as a cost object would include direct material and direct labor costs used in its production. Such direct costs include wheels, brakes, chains, and seat, plus the wages and benefits of the employees who work directly on making the bike.

What are indirect costs associated with bicycles? One example is the salary of the supervisor. She monitors the production process and other factory activities, but she does not actually work on producing any bikes. Thus, her salary cannot be directly traced to bikes. Likewise, depreciation (other than the units-of-production method) on manufacturing warehouses cannot be traced to individual bikes. Another example is a maintenance department that provides services to two or more departments of a company making bicycles and strollers. If the cost object is the bicycle, the wages of the maintenance department employees who clean the factory area every night would be indirect costs. Exhibit 1.6 identifies more examples of direct and indirect costs when the cost object is a bicycle.

Decision Maker



Entrepreneur You wish to trace as many of your assembly department's direct costs as possible. You can trace 90% of them in an economical manner. To trace the other 10%, you need sophisticated and costly accounting software. Do you purchase this software? ■ [Answers follow the chapter's Summary.]



Direct Costs (for bicycle)

- Tires
- Seats
- Handlebars
- Bike maker wages
- Frames
- Chains
- Brakes
- Bike maker benefits



Indirect Costs (for bicycle)

- Factory accounting
- Factory administration
- Factory rent
- Factory manager's salary
- Factory light and heat
- Factory intranet
- Insurance on factory
- Factory equipment depreciation*

* For all depreciation methods other than units-of-production.

EXHIBIT 1.6

Direct and Indirect Costs for a Bicycle

Product versus Period Costs All production (or factory) costs are product costs. **Product costs** are those production costs necessary to create a product and consist of: direct materials, direct labor, and factory overhead. Overhead refers to production costs other than direct materials and direct labor. Product costs are capitalized as inventory during and after completion of the products; they are recorded as cost of goods sold when those products are sold.

Period costs are non-production costs and are usually more associated with activities linked to a time period than with completed products. Common examples of period costs include salaries of the sales staff, wages of maintenance workers, advertising expenses, and depreciation on office furniture and equipment. Period costs are expensed in the period when incurred either as selling expenses or as general and administrative expenses.

A distinction between product and period costs is important because period costs are expensed when incurred and reported on the income statement whereas product costs are capitalized as inventory on the balance sheet until that inventory is sold. An ability to understand and identify product costs and period costs is crucial to using and interpreting a *schedule of cost of goods manufactured*, described later in this chapter.

Exhibit 1.7 shows the different effects of product and period costs. Period costs flow directly to the current income statement as expenses. They are not reported as assets. Product costs are

C3

Define product and period costs and explain how they impact financial statements.

Point: Product costs are either in the income statement as part of cost of goods sold or in the balance sheet as inventory. Period costs appear only on the income statement under operating expenses.

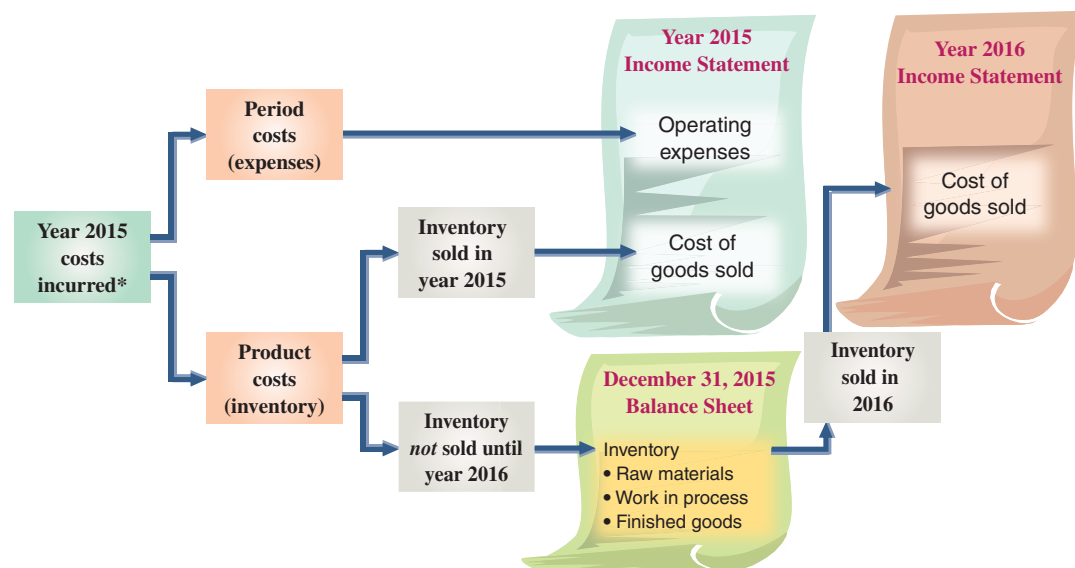


EXHIBIT 1.7

Period and Product Costs in Financial Statements

Point: For a team approach to identifying period and product costs, see *Teamwork in Action* in the *Beyond the Numbers* section.

* This diagram excludes costs to acquire assets other than inventory.