Cost Analysis and Control


18 lessons and 3 exams. 3 hours of college credit. 12/17/09.

Prerequisite: Grade of "C" or above in ACCT 3001 (Intermediate Accounting I or equivalent).
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<td>A–7</td>
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</tbody>
</table>
Welcome

Congratulations! By enrolling in this course, you have taken a major step toward achieving your educational goals. We would like to let you know what you need to do before you start studying and remind you of some of our procedures and rules (for a full listing, please check our website at www.outreach.lsu.edu/idl).

Textbooks

To find out which textbooks you need for the course, refer to the course syllabus. To order your textbooks, see “Where the Books Are” on page vii in this course guide. If you wish to order your books by mail, please use the “Textbook Order Form” that is enclosed in your packet of materials.

Other Materials
How to Take an IDL Course

Check to see if you need any supplementary materials, or if you need to arrange any interviews or extra materials for projects. You can find this information by reading “Other Materials” section in the course syllabus, and then reviewing the Lesson Assignments at the end of each lesson.

Time Limits & Extensions

Start planning your timetable now. Please note the following rules concerning timing:

- You have an enrollment period of *nine months* from the date of your enrollment to complete this course. If you are an LSU student, your dean may have given you a shorter deadline. If you cannot finish your course within nine months, you can make a written request for an extension of an additional three months, provided we receive your request before your course enrollment expires. It may be possible to request a second extension. Second extensions are given when you have made progress in the course, but have encountered significant difficulty in reaching completion. For a second extension, you must make a written request, explaining your circumstances. The request must be received prior to the expiration of the first extension period. There is a fee for each extension.

- We will accept a *maximum* of three lessons every seven calendar days. There must be an interval of seven days between each set of three lessons. If you submit more than three lessons in a seven-day period, the additional lessons will be held until they are eligible, and then logged in and forwarded to your instructor for grading. If more than six lessons are received in a seven-day period, the ineligible lessons will be returned to you for resubmission.

- We recommend that you submit your first lesson and wait for your instructor’s feedback before submitting additional lessons. That way, you will know whether you have a clear understanding of your instructor’s expectations.

- We ask your instructor to grade your lessons and exams within two weeks, but during campus examination periods and vacation time, it may take your instructor longer to return your work.

- **If you are a graduating senior**, you must allow *at least* four weeks between taking your final exam and expecting your transcript to reach your university.

Exams & Grading
As soon as possible, begin to make arrangements for where you will take your examinations. To find out about your options, read the College Examination Information in the appendix of this course guide. Then (if you do not plan to take your exam at LSU-BR), fill in the Exam Proctor Information Form in the appendix and send it to us before you start the course, so that we will have all your information prepared when you are ready to take your examinations.

Before we can send your exams to your exam proctor or allow you to take your exams in our office, we must have received all of your completed lesson assignments that precede the exam. Exams may not be taken until all of the assigned lessons have been submitted and accepted within our three-lessons-per-seven-days requirement. If an instructor grades any of your assignments as incomplete, you will not be eligible to take your exam(s) until you have completed the lessons.

Each course has its own grading scale, but for nearly all courses you must pass the final exam to receive credit for the course.

Remember that you only have one chance to take your examinations. You will not be allowed to repeat a failed exam within the same enrollment period. If you need to re-enroll in a course, please contact our office.

Typically, you will have three hours to take a three-credit-hour exam.

You should take your exam at least four weeks before you need your grade.

Refunds & Transfers

We hope you have enrolled in the course you wanted, but if not, you have 30 days to make a written request to receive an 80% refund, provided you have not submitted any lessons. Alternatively, you can transfer to another course, provided you make your written request within three months and pay a transfer fee. If you transfer, your enrollment period begins on the date of your original enrollment. Enrollments may not be transferred to another student.

If you want to withdraw from a course after the refund and transfer periods have expired, please let us know in writing that you have decided to drop the course. Provided that you do not sign in to take your final
examination, there will be no record on your transcript to indicate that you ever enrolled in the course.
Electronic Resources

The IDL Web site (www.outreach.lsu.edu/idl) includes up-to-date information on policies and procedures as well as resources and a number of online options to help you with your course. From the enrolled students link you may check to see whether we have received a lesson or exam, find out your grades, enroll in a course, submit change of address and exam proctor forms, and locate contact information for LSU Independent & Distance Learning staff members.

Contact Us

If you need us to clarify any of our policies, let us know! We are available by phone, by mail, by fax, and by e-mail.

TELEPHONE NUMBERS

Enrolled Students
Contact your assigned Learner Specialist directly for questions and guidance. Your Learner Specialist is assigned to you based on the first letter of your last name.

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<tr>
<th>Your Initial</th>
<th>Telephone Number</th>
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<tbody>
<tr>
<td>A–C</td>
<td>225-578-7124</td>
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<td>D–G</td>
<td>225-578-3172</td>
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<td>H–L</td>
<td>225-578-3196</td>
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<td>M–R</td>
<td>225-578-3185</td>
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<td>S–Z</td>
<td>225-578-0776</td>
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General Inquiries
If you are not yet enrolled in a course but have a question about courses, use one of the following numbers.

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<tbody>
<tr>
<td>Phone</td>
<td>225-578-2500</td>
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<tr>
<td>Toll-Free Number</td>
<td>800-234-5046</td>
</tr>
<tr>
<td>Fax Number</td>
<td>225-578-3090</td>
</tr>
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How to Take an IDL Course

ADDRESS
Independent & Distance Learning
1225 Pleasant Hall
Louisiana State University
Baton Rouge, LA 70803-1508

E-MAIL ADDRESSES

Enrolled Students: http://answers.outreach.lsu.edu

Independent & Distance Learning: answers@outreach.lsu.edu
For information about College Independent & Distance Learning

Web Site: iswebmaster@outreach.lsu.edu
Comments or questions concerning Independent & Distance Learning's Web site
Where the Books Are

Contents

✓ General Textbook Information
✓ LSU Online Bookstore
✓ Local Baton Rouge Bookstores
✓ Other Online Options

General Textbook Information

You must buy your own textbooks and other supplies. The bookstores listed below stock the textbooks used in LSU Independent & Distance Learning courses. If the books are not available from one of the following bookstores, they may be available from the publisher, online vendors, or from other local booksellers.

Other required materials for your course such as calculators, binders, etc., may be purchased locally.

Secondhand and paperback copies of textbooks are often available. If secondhand or paperback books are desired, make that request at the time the order is placed.

**You must use the edition of the textbook specified by the course guide!**
Please do not ask if an alternate book is available. **Always** order using the ISBN provided in the syllabus to insure that you have the correct materials.

All of the bookstores listed below are *independently owned and operated*; they are not operated by Louisiana State University or LSU Independent & Distance Learning. Please be aware of refund and buy-back policies before you make your purchase.

LSU Online Bookstore

**Specialty Books** is the official bookstore for LSU Continuing Education. To order your textbooks online, go to [www.specialty-books.com/LSU](http://www.specialty-books.com/LSU) and follow the instructions provided.
Where the Books Are

**Specialty Books**
6000 Poston Road
Athens, OH 45701
800-466-7132
[www.specialty-books.com/LSU](http://www.specialty-books.com/LSU)

**Note:** Specialty Books is not a part of LSU; any questions or concerns should be directed to their representatives.

**Local Baton Rouge Bookstores**

The following Baton Rouge bookstores also carry course materials and textbooks:

**Chimes Textbook Exchange** (Gonzales location)
432 N. Burnside Avenue
Gonzales, LA 70737
800-925-1704 (toll-free)
E-mail: [Chimestext@eate1.net](mailto:Chimestext@eate1.net)

**Chimes Textbook Exchange**
268 W. Chimes St.
Baton Rouge, LA 70802
225-383-5161
[www.chimestext.com](http://www.chimestext.com)

**Co-Op Bookstore**
3960 Burbank Dr.
Baton Rouge, LA 70808
225-383-9870 or 866-383-9870 (toll-free)
E-mail: books@coopbookstore.com
[www.coopbookstore.com](http://www.coopbookstore.com)

**Note:** Always order using the ISBN provided in the syllabus to insure that you have the correct materials. These bookstores carry a wide variety of books that are used in on-campus and IDL courses. Be sure to indicate that you are ordering a book for an independent study course.

**Other Online Options**

Books may also be obtained from any vendor that sells college-level textbooks, including online booksellers, university bookstores, and publishers, but you must purchase the correct edition of the textbook(s). Independent & Distance Learning does not sell textbooks (any exceptions are specifically indicated in
your course guide), so please do not send money for textbooks to Independent & Distance Learning.

**You must use the correct edition of the textbook, as specified in your course guide.** Please take care to provide the correct information about the author, title, edition, ISBN, and date of publication when ordering your books. If complete information is not given when the order is placed, the wrong edition may be sent.

The best way to make sure that you order the correct textbook is to order by the ISBN provided in the syllabus.

ACCT 3121—Cost Analysis and Control

✔ Textbooks
✔ Nature and Purpose of the Course
✔ Working with the Course Material
✔ Reading Assignments
✔ Preparation of Lesson Assignments
✔ Contact Information
✔ Examinations and Grading Policy
✔ Transcript Information
✔ Examination Proctors

Textbooks


ISBN 13: 978-1-12-142872-0

It is recommended that you buy your textbooks as soon as possible. If you wait, you may not be able to find the correct textbooks. During the nine months that you have to complete the course, a revised version of the course may be released. If the newer version of the course uses a more recent edition of the textbook or a different textbook from the one required by the version that you are enrolled in, you may have difficulty getting the textbook that you need for
your version of the course. For that reason, you should buy your textbooks as soon as possible.

If you have trouble finding a book, check the list of recommended bookstores on the IDL website and order by the ISBN, not the title. If you are outside of the Baton Rouge area and try to buy your textbook locally or from an online bookstore and have difficulty locating the correct textbook or the required edition, please call one of the recommended bookstores. These bookstores try to maintain an inventory of all IDL textbooks. Be sure to specify that you need a textbook for the Independent & Distance Learning version of the course and verify the ISBN number to make sure you get the correct edition of the textbook.

Other Materials

No additional materials are needed for this course. All assignments submitted by mail should be written clearly on the front of submitted pages only.

For students with Internet access, the publisher’s online Web site (www.mhhe.com/hilton9e) is a good supplemental tool for self assessment and additional explanations of course materials. No assignments will be required from the Internet source.

Nature and Purpose of the Course

The main question addressed in cost analysis and control is the following: “What is the cost of a product or service, and how do we determine and control the cost?” To answer this broad question, we will examine how products are made or services are provided and what resources are required to make the product or perform the service.

We will also look at several other areas to give the student a comprehensive understanding of the following:

1. the nature of cost/management accounting as compared to financial accounting and how cost accounting provides information to both
2. basic cost definitions and terminology
3. methods of cost collection including job-order costing and process costing
4. methods of cost allocation including traditional methods, activity-based costing, allocation of service department costs to production departments, joint products, and by-products
5. cost-volume-profit, variable and absorption costing, and incremental analysis; illustrating the use of cost behavior and allocation in management decision making
6. the master budget process; operational and capital budgeting accounting
Syllabus

7. inventory costing and capacity analysis
8. pricing decisions
9. profitability analysis
10. balanced scorecard considerations

As you progress through the course, you will notice that these topics address very practical day-to-day business issues and that this accounting course is less structured and rules-oriented than financial accounting.

Working with the Course Material

The objectives of this course are to expose you to cost and managerial accounting concepts that you will use in your chosen career and in decisions that you will face every day.

If you complete the lesson assignments and work the study guide, you should be well prepared for examinations. Good grades on the lesson assignments, however, do not necessarily mean you will achieve good grades on exams. Lesson assignments are “open book” and examinations are “closed book,” with no “formula” sheets. Keep this in mind as you proceed through the lessons and prepare for examinations. Plan to take exams soon after completing the related required lessons. Past experience shows that students achieve higher levels of exam success this way rather than completing all lessons and then testing.

This course can be mastered through independent work. Some find it difficult to gather the self motivation and inspiration to put in the time that this process requires. Successful performance in this course requires significantly more commitment than you might expect to extend for a normal classroom setting. Extra time spent reading the chapters and working problems can make the difference between thoroughly understanding a concept and just being familiar with it.

Reading Assignments

Each chapter should be read in detail with recalculation of numbers in illustrations (not read like a novel). The student should enhance understanding of chapter content by working all chapter materials in the student study guide. Successful mastery of each lesson assignment may take 6 to 10 hours of student effort, if not more.

Preparation of Lesson Assignments

Remember, this course covers an entire semester of work or the equivalent of a classroom course lasting fifteen weeks. That means that each lesson in this course equals nearly a week of course work and will require the same time and
Syllabus

effort on your part. Do not expect to complete each lesson in a single study session.

In order to receive the most rapid service, mail each lesson in one of the addressed envelopes as soon as the lesson is completed or use the electronic submission option (see Electronic Submission Options in the appendix for additional information).

General Instructions

A large part of the instructional process is conducted through the lesson assignments that are located at the end of each lesson. Follow the steps listed below when mailing assignments.

1. Type or write on one side of 8 ½” by 11” paper, leaving a one-inch margin on both sides for instructor notes.

2. Put your name, enrollment number, and course number at the top right hand corner of each page. Number your pages 1 of __, etc.

3. Make a copy of your lessons in case any of them are lost in the mail.

4. Complete a lesson cover sheet (located in your course packet) for each lesson, and fold it so that your address is on the outside.

5. Submit one lesson per envelope. Failure to follow this procedure may result in your lesson not being recorded for grading and will require resubmission.

6. For each lesson, place the corresponding label on the envelope, and mail or bring to the IDL office.

7. Your lessons will be recorded according to the date received in the IDL office, not the date you mailed them.

8. IDL will only accept three lessons every seven calendar days.

9. Follow any additional instructions listed below.

Each lesson will require the student to read the chapter material and complete the exercises from the study guide. The study guide exercises should not be submitted to the instructor. The study guide provides a variety of question formats. These exercises can be supplemented with the online information for additional understanding and application.

Once the student feels he or she has mastered the lesson content, the assigned multiple choice (MC) questions in the LSU course guide should be completed
along with the selected chapter problems from the text. The MC and chapter problems from the text are to be submitted to Independent & Distance Learning office for grading.

Again, each lesson assignment will require the following:

- multiple-choice questions included in this course guide, and
- a group of written responses arising from answering assigned questions and problems at the end of each chapter in the textbook.

**Course Specific Instructions**

The lesson assignments are designed to give the student the opportunity to read, review, and study the main issues presented in the textbook. In order to provide efficient processing of lesson assignments, the student must use the following procedures:

1. Follow General Instructions above.
2. If using online submission, please use no smaller than an **8-point font** for work. The work may also be submitted in landscape format.
3. *Do not tear out or duplicate the pages of the course guide*. Submitted answers should be in the format of the question number (#1, #2, etc.) and related letter answer (a, b, etc.) or vice versa (a, b, etc.) and (#1, #2, etc.).
4. Type or clearly write long problems assigned from the textbook. Problems and related answers should be clearly numbered.
5. Do not request email copies of corrected answers. Retain a file copy of each lesson assignment. Corrected copies with comments will be sent to you when available. Keep this in mind when scheduling exams.

**Suggested Study Techniques**

Carefully study the textbook, study guide material (if applicable), additional resources provided, and the information in your course guide before you begin to prepare the lesson assignments. This study should include a detailed examination of the illustrative problems and examples, as well as the assigned reading. After a lesson assignment has been completed, a rapid re-reading of the related text and other materials is strongly recommended.

Review your lesson assignments after they have been graded and returned to you. LSU Independent & Distance Learning suggests that you wait for your first lesson to be returned to you before you submit subsequent lessons; however, after the first lesson, it is normally not necessary to wait for the corrected lesson assignment to be returned before completing and submitting the next one.
Syllabus

One temptation you may have in an independent learning course is to rely too heavily on textbook material when preparing your lesson assignment. If you give in to such a temptation, you may not realize until exam time that the perfect response you prepared was possible only because you repeatedly referred to the textbook without really learning or understanding the material. Therefore, you should attempt each assignment without referring to the textbook, and if “thumbing back” is necessary, be sure you have actually learned the point rather than merely reflected it in the answer.

Put yourself on a definite schedule. Set aside a certain block of hours per day or week for this course and work in a place where distractions are minimal. Try to submit a lesson each week or at least every two weeks. Delays in submitting lessons usually result in lagging interest and the inability to complete the course.

Academic Integrity

LSU Independent & Distance Learning adheres to Louisiana State University’s policy on academic misconduct. This policy defines plagiarism as follows:

“Plagiarism” is defined as lack of citation the unacknowledged inclusion of someone else’s words, structure, ideas, or data. When a student submits work as his/her own that includes the words, structure, ideas, or data of others, the source of this information must be acknowledged through complete, accurate, and specific references, and, if verbatim statements are included, through quotation marks as well. Failure to identify any source (including interviews, surveys, etc.), published in any medium (including on the internet) or unpublished, from which words, structure, ideas, or data have been taken, constitutes plagiarism. Plagiarism also includes:

Falsifying or fabricating any information or citation in any academic exercise, work, speech, thesis, dissertation, test, or examination.

Submission of essentially the same written assignment for two courses without the prior permission of the instructors.¹

Contact Information

If you need to contact your instructor concerning your lesson assignment, you may include a note with your completed assignment, or you may email him or her at MyInstructor@outreach.lsu.edu. Your instructor does not have an office within the Independent & Distance Learning building. Instructors only answer questions related to course content. Please direct all other questions to our Learner Services office by emailing Answers@outreach.lsu.edu or by calling 800-234-5046.

Examinations and Grading Policy

There will be three examinations worth 100 points each. Exam one follows Lesson 6 and will cover Lessons 1–6, exam two follows Lesson 12 and will cover Lessons 7–12, and the final exam follows Lesson 18 and will cover Lessons 13–18. These exams each consist of 40 multiple-choice questions and one long problem. A basic function or business analyst calculator only may be used on the exams. **No graphing calculators will be allowed.**

There will be 18 lesson assignments worth 5 points each. Points will be assigned a letter grade as indicated below:

- 5.0 = A+
- 4.5–4.9 = A
- 4.0–4.4 = B
- 3.5–3.9 = C
- 3.0–3.4 = D
- 0.0–2.9 = F

Your course grade will be determined by adding all points earned in the lesson assignments and all points earned on the exams. Each grading component will be weighted according to the chart below.

The following grading scale applies:

- 90%–100% = A
- 80%–89% = B
- 70%–79% = C
- 60%–69% = D
- 0%–59% = F

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<td>23.08%</td>
</tr>
<tr>
<td>Exam I</td>
<td>25.64%</td>
</tr>
<tr>
<td>Exam II</td>
<td>25.64%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25.64%</td>
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**YOU MUST PASS THE FINAL EXAMINATION IN ORDER TO PASS THE COURSE.**

You must pass the final exam to pass the course, no matter how many overall points have been accumulated.
Transcript Information

After you have completed this course, your grade will be filed with the Office of the University Registrar. If a transcript is needed, it is your responsibility to make a request in writing to:

Office of the University Registrar
Louisiana State University
Thomas Boyd Hall
Baton Rouge, LA 70803
FAX: 225-578-5991

Examination Proctors

If you are not going to take your exam at LSU–Baton Rouge, notify us of your proctor by sending the completed Exam Proctor Information Form located in the appendix of this course guide to the Independent & Distance Learning office.

Please read the College Examination Information document in the appendix of this course guide for further details.
Lesson 1: Cost Management and Strategic Decision Making

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

- Understand how cost management supports strategic planning and decision making
- Understand the importance of ethical behavior in decision making
- Describe and understand the steps in strategic decision making
- Apply benefit-cost and variance analysis to help evaluate an organization’s strategic plans

Key Terms

Understand key terms on page 24 in the text written by Hilton, Maher, & Selto (hereafter referred to as Hilton, Maher, & Selto).

Lesson Introduction

The purpose of Chapter 1 is to introduce the student to the concept of cost management accounting and its applications in business: manufacturing, service, or non-profit. You will be introduced to many new terms and concepts. Although some of the concepts that you learned in financial and intermediate accounting will be used (primarily journal entry concepts and the income statement), in this course you will learn many new ones.

In previous accounting courses, you focused on double-entry bookkeeping and the theory underlying financial statements with an ultimate purpose of external reporting and generally accepted accounting principles (GAAP). The focus of
this course is providing information internally to managers upon which they can make business decisions. We will use accounting principles as the foundation in this course but also move beyond; that is, you will step back as if you are not just the purchaser and recorder of merchandise but as if you are the maker of the goods. You will be given many manufacturing examples because this type of organization offers tangible illustrations that should be easy to understand. It will be very important for you to understand the new terms and concepts as you move through the chapters. Only a few will be used for the initial chapters, but succeeding chapters will build on the foundation laid by the earlier terms. If your foundation is weak, it will be difficult to continue with a full understanding of the concept.

As you move through the course, look for my comments about your need to understand fully any concept that may continue to be used in future chapters. If you find that your knowledge and understanding is weak, read and study the concept again for better retention and application.

This course is primarily about cost accounting. However, the broader focus is the impact that cost accounting has on many decisions that are made in an organization. The impact ranges from establishing a selling price to determining which products to produce. Understanding costs helps us develop and implement both short-term and long-term strategies. Understanding cost concepts helps us evaluate the impact of our decisions so that we can continue to make good ones or improve upon them in the future.

As you read through Chapter 1 in your text, pay particular attention to the new terminology. You do not need to focus much on the various accounting organizations or try to learn all of the certification requirements.

To use a value analogy, we want to focus on the value-added concepts in the chapter. “Value-added” means those that may lay a foundation of concepts to come.

Reading Assignment

Hilton, Maher, & Selto, Chapter 1, pages 2–20

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 1 “Chapter Highlights” on pages 1–6 in the Study Guide (hereafter referred to as SG).
Lesson 1: Cost Management and Strategic Decision Making

2. Complete “Review and Self Test Questions and Exercises” on pages 7–13 in the SG. You may check your answers on pages 14–16.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

____ 1. Cost management is:
   A. a philosophy to create more value at lower cost
   B. an attitude to create more value at lower cost
   C. a set of techniques to create more value at lower cost
   D. all of the above
   E. none of the above.

____ 2. Cost management is concerned with:
   A. creating more value for the customer
   B. being proactive in decision making
   C. continuously assisting organizations in making the right decision
   D. all of the above
   E. A and C only.

____ 3. Outsourcing is:
   A. using employees of the organization to provide needed goods or services
   B. using outside parties to obtain needed goods or services
   C. using employees and outside parties to provide needed goods or services
   D. either B or C
   E. none of the above.

____ 4. Scale of operations refers to the:
   A. breadth of operations
   B. size or volume of operations
   C. number of employees in the operation
   D. all of the above
   E. A and B only.
5. Physical resources to achieve a company’s long-term strategies include:
   A. cash and receivables
   B. inventories and supplies
   C. property and equipment
   D. all of the above
   E. none of the above.

6. Benchmarking is comparing one’s performance against:
   A. the best performers
   B. the budget
   C. the prior year
   D. all of the above
   E. A and B only.

7. The value chain includes the areas of:
   A. research and development, design, and supply
   B. production and marketing
   C. distribution and customer service
   D. all of the above
   E. none of the above.

8. Customer service refers to:
   A. the management of incoming parts
   B. the provision of administrative support for operations
   C. the process that informs customers about the attributes of products
   D. the delivery of products or services to the customers
   E. none of the above.

9. Cost-benefit analysis is:
   A. a technique for identifying opportunities for improvement
   B. a technique that measures the effects of proposed improvements
   C. a technique that compares the costs and benefits of a proposal
   D. all of the above
   E. A and C only.

10. Opportunity cost is:
    A. the benefit foregone because of choosing another alternative
    B. a real cost like salaries paid to salespeople
    C. not explicitly recorded on any accounting statement
    D. all of the above
    E. none of the above.
Lesson 1: Cost Management and Strategic Decision Making

11. Cost managers need:
   A. broad knowledge of the organization’s activities and how those activities interact
   B. the ability to provide information, interpretations, and analyses of alternative courses of action that managers are contemplating
   C. to identify opportunities to improve operational efficiency
   D. all of the above
   E. B and C only.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Hilton, Maher, & Selto: Exercise 1.32, page 29;
Exercise 1.38, page 31
Lesson Objectives

After you have completed this lesson, you should be able to do the following:

- Explain the role of product costs, period costs, and expenses in financial statements
- Prepare an income statement and a schedule of cost of goods manufactured and sold
- List the components of manufacturing cost, and diagram their flow through a manufacturing process
- Explain how unit-level, variable, and fixed costs differ
- Understand the concepts of opportunity costs, sunk costs, committed costs, direct costs, and indirect costs
- Prepare income statement using absorption, variable, and throughput costing
- Reconcile income under absorption, variable, and throughput costing
- Discuss the advantages and disadvantages of absorption, variable, and throughput costing

Key Terms

Understand key terms on page 71 of Hilton, Maher, & Selto.

Lesson Introduction

This chapter has a wealth of valuable definitions and new concepts that will be used throughout the course. Within the chapter you will get brief introductions
to cost terminology and cost-flow concepts. Thoroughly understanding all
terms and concepts is imperative because these terms and concepts are the
foundation for all future chapters. A complete grasp now will make the reading
of future chapters easier and make the information more understandable.

Look very closely at the examples given for the terms, and review the exhibits in
detail. If you find the need in future chapters, come back and refer to this
chapter.

The remainder of the chapter focuses on a new statement that captures costs as
they are sent into the factory. The statement is called the cost of goods
manufactured. As indicated in Lesson 1, organizations and businesses don’t
purchase units; they actually make them. Therefore, it will not do just to have an
inventory purchases account; a different statement is needed. The organizations
or businesses are no longer buying goods and putting them on the shelf for
resale. Because access to factory environments is usually limited, they actually
have to track everything that it takes to make the products and relay the
information to managers and other employees on paper.

The cost of goods manufactured is a very important statement for businesses
that make their products or provide services. Make sure that you understand
how the cost of goods manufactured connects to the schedule of cost of goods
sold in the income statement. It will be used again in Chapter 3 as a part of the
cost-flow process. We will take a closer look at the overhead concept in the next
chapter.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 2, pages 38–71

**Self Check**

*Read and complete the following. Check your answer to the activities
against the solutions provided at the end of the chapter. Do not submit
self-check activities for grading.*

1. Read and review Chapter 2 “Chapter Highlights” on pages 17–24 in the
   SG.

2. Complete “Review and Self Test Questions and Exercises” on pages 25–
   32 in the SG. You may check your answers on pages 33–36.
Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

____ 1. Product cost is a cost that is:
   A. identified with the period in which it is incurred
   B. either purchased or manufactured for resale
   C. manufactured as a tooling for the plant
   D. incurred when an asset is used up or sold for the purpose of generating revenue.

____ 2. A period cost is a cost that is:
   A. identified with the period in which it is incurred
   B. either purchased or manufactured for resale
   C. manufactured as a tooling for the plant
   D. incurred when an asset is used up or sold for the purpose of generating revenue.

____ 3. Inventoriable cost is a cost that is:
   A. identified with the period in which it is incurred
   B. either purchased or manufactured for resale
   C. manufactured as a tooling for the plant
   D. incurred when an asset is used up or sold for the purpose of generating revenue.

____ 4. ABC Company used 210 pounds of x at $5 a pound. Direct labor amounted to 130 hours at $8 an hour. Overhead is approximately 200% of labor, and total actual manufacturing cost amounted to $4,090. Actual overhead amounts to:
   A. $2,000
   B. $2,020
   C. $2,040
   D. $2,080.
5. NBC Company had a total material cost of $1,050, total direct labor of $1,040, and overhead amounting to 200% of direct labor. Prime cost amounts to:
   A. $2,080
   B. $2,090
   C. $3,120
   D. $4,170.

6. NBC Company had a total material cost of $1,050, total direct labor of $1,040, and overhead amounting to 200% of direct labor. Conversion costs amounts to:
   A. $2,080
   B. $2,090
   C. $3,120
   D. $4,170.

7. NHI Company had a total direct labor of 120 hours for the period at the rate of $8 an hour. Ten percent (10%) of this time was on an exceptional overtime basis with a pay premium of 50% of regular rate. Total direct labor cost amounts to:
   A. $960
   B. $1,008
   C. $1,056
   D. $1,104.

8. ABC Company’s current manufacturing costs amount to $4,090, and work in process at the end of the period amounts to $1,120. A total of 100 units at the cost of $41.80 were completed. Work in process at the beginning of the period amounts to:
   A. $1,110
   B. $1,120
   C. $1,210
   D. $1,220.

9. A cost driver is:
   A. any discrete task that an organization undertakes
   B. any task that results in delivery of goods or services
   C. a characteristic of an activity or event that causes costs to be incurred by that activity or event
   D. none of the above.
10. Material-handling cost is an example of:
   A. unit-level costs
   B. batch-level costs
   C. product-level costs
   D. facility-level costs.

11. Product design cost is an example of:
   A. unit-level costs
   B. batch-level costs
   C. product-level costs
   D. facility-level costs.

12. Ryan decided to buy a car that cost him $18,000. His dad could not convince him to save the money and earn an interest of 10% on it for the life of the car, which is probably five years. No interest is paid on the interest earned. Opportunity cost of this decision amounts to:
   A. $1,800
   B. $9,000
   C. $13,500
   D. $18,000.

13. SABA Company decided to make part A at a cost of $12 a unit, which includes $6 in material and labor plus an overhead of 100% on direct cost. One-half of overhead is fixed overhead that will continue whether the goods are made or brought from outside. The relevant cost of A for this decision is:
   A. $6
   B. $9
   C. $12
   D. $15.

14. With regard to fixed and variable costs, we can say that:
   A. fixed cost per unit remains that same regardless of output
   B. total variable cost remains the same regardless of output
   C. unit cost which includes a small amount of variable cost remains constant regardless of volume
   D. variable cost per unit remains the same regardless of output.

15. Absorption costing:
   A. is intuitive
   B. is straight-forward
   C. reports fixed versus variable manufacturing cost separately on the income statement
   D. none of the above.
Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 2.33, page 73;
Exercise 2.35, page 74;
Exercise 2.39, page 74–75;
Exercise 2.45, pages 76–77
Lesson 3: Cost Accumulation for Job-Shop and Batch Production Operations

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Explain the difference in job-order, process, and operation costing systems
✓ Explain how costs flow through the manufacturing accounts
✓ Assign costs to production jobs or projects using a job-order costing system
✓ Prepare accounting journal entries to record job costs
✓ Use a predetermined overhead rate to assign indirect resource costs to production jobs
✓ Explain how to measure production costs under actual, normal, and standard costing systems
✓ Discuss the role of job-order costing in service organizations
✓ Understand how companies manage long-term projects and their costs

Key Terms

Understand key terms on page 122 of Hilton, Maher, & Selto.

Lesson Introduction

Chapter 3 focuses on what is commonly called job-order costing. You will be introduced to the movement of cost through the organization commonly called cost flow. Information is presented from a manufacturing point of view because the tangible product examples are often more easily understood.

There are usually three raw resources used to make a unit of product: direct materials, direct labor, and manufacturing overhead (OH). (OH consists of
various indirect items.) The raw resources are sometimes labeled manufacturing costs.

When the unit of product is started and the resources are placed in production, the location where the resources are accumulated is called “work in process” (WIP). WIP is the second stage of cost flow. As units are completed, they move from WIP to “finished goods” (FG), awaiting sale to customers. It is very important to understand that the resources used to make products remain the company’s assets until it sells the product. So the company is in essence taking cash, buying resources to make units of product with a final goal of selling them.

There are four main stages to cost flow:
Stage 1—use of cash to gather raw resources (raw materials, labor, and manufacturing overhead);
Stage 2—WIP: conversions of resources to product;
Stage 3—FG: holding place for finished goods awaiting sale to customers; and
Stage 4—COGS: cost of goods sold to customers.

Raw-materials, work-in-process, and finished goods are all inventory accounts. Costs for resources used are recorded and maintained in these asset accounts until goods are sold. When goods are sold, they are finally expensed and sent to the income statement as cost of goods sold. This process is the true “matching theory”: matching the revenues to the expenses that generated the revenues.

Particular attention is also paid to the manufacturing overhead account, which is a temporary account. It is established to facilitate timing differences between usage of cost, billing, payment of costs, and the production of units. Make sure that you understand the manufacturing overhead account completely, especially the individual components that make it up. The text gives the 10 most common items that constitute overhead. There may be others, depending on the industry environment.

Mastery of this chapter will take some time. But for the purposes of success on the exam and knowledge for future chapters, the extra time will be well spent. Much of the information in the following chapter builds on and reinforces the concepts learned here.

Once you finish reading the chapter, immediately complete the self-check assignment below. If after working the self check, if you still don’t feel comfortable, go back and read the chapter again before doing the graded assignment. Then attempt the lesson that will be turned in. The information in this chapter is very important.

Reading Assignment

Hilton, Maher, & Selto, Chapter 3, pages 92–122
Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 3 “Chapter Highlights” on pages 37–45 in the SG.


Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

____  1. Assume work in process beginning of $16,000, with added costs of $95,000. Cost of goods completed amounts to $89,000, and there is an additional cost of defective goods amounting to $3,650. The work in process ending amounts to:
   A. $32,000  
   B. $28,350  
   C. $22,000  
   D. $18,350  
   E. none of the above.

____  2. Budgeted cost:
   A. uses expected costs of resource use  
   B. is more appropriate when conditions are expected to be different from the past  
   C. uses average past spending for higher-level resources  
   D. none of the above  
   E. both A and B.
Lesson 3: Cost Accumulation for Job-Shop and Batch Production Operations

3. ABC Company’s overhead amounts to $300,000 per period based on an output of 200 units of A, 300 units of B, and 500 units of C. Direct labor costs of A, B, and C per unit amount to $75, $50, and $40 respectively. Each unit also requires 7, 12, and 20 machine hours per unit of production respectively. Using direct labor as the cost driver, total overhead chargeable to job/product A amounts to:
   A. $20,000
   B. $90,000
   C. $100,000
   D. $110,000
   E. none of the above.

4. ABC Company’s overhead amounts to $300,000 per period based on an output of 200 units of A, 300 units of B, and 500 units of C. Direct labor costs of A, B, and C per unit amount to $75, $50, and $40 respectively. Each unit also requires 7, 12, and 20 machine hours per unit of production respectively. Using direct labor as cost driver, overhead chargeable per unit of C amounts to:
   A. $240
   B. $300
   C. $360
   D. $450
   E. none of the above.

5. ABC Company’s overhead amounts to $300,000 per period based on an output of 200 units of A, 300 units of B, and 500 units of C. Direct labor costs of A, B, and C per unit amount to $75, $50, and $40 respectively. Each unit also requires 7, 12, and 20 machine hours per unit of production respectively. Assuming that 40% of overhead relates to labor and 60% relates to machine hours, the overhead chargeable per unit of A amounts to:
   A. $234
   B. $264
   C. $296
   D. $336
   E. none of the above.
6. JVC Company has three jobs outstanding. The company uses normal costing, and the overhead rate, which is based on machine hours, amounts to $96 per machine hour based on a forecast of 4,000 hours. Job 1 with a direct cost of $94,300 has used 1,290 machine hours. Job 2 with a direct cost of $74,700 has used 1,760 machine hours. Job 3 with a direct cost of $87,470 has used 789 hours. Actual overhead amounts to $375,000. Budgeted overhead amounts to:
   A. $368,544
   B. $375,000
   C. $384,000
   D. $394,000
   E. none of the above.

7. JVC Company has three jobs outstanding. The company uses normal costing, and the overhead rate, which is based on machine hours, amounts to $96 per machine hour based on a forecast of 4,000 hours. Job 1 with a direct cost of $94,300 has used 1,290 machine hours. Job 2 with a direct cost of $74,700 has used 1,760 machine hours. Job 3 with a direct cost of $87,470 has used 789 hours. Actual overhead amounts to $375,000. Job 1 is completed and sold for $276,500. Job 2 is completed and not yet delivered. Job 3 is still in process. The total cost for Job 1 amounts to:
   A. $163,214
   B. $218,140
   C. $243,660
   D. $262,164
   E. none of the above.

8. JVC Company has three jobs outstanding. The company uses normal costing, and the overhead rate, which is based on machine hours, amounts to $96 per machine hour based on a forecast of 4,000 hours. Job 1 with a direct cost of $94,300 has used 1,290 machine hours. Job 2 with a direct cost of $74,700 has used 1,760 machine hours. Job 3 with a direct cost of $87,470 has used 789 hours. Actual overhead amounts to $375,000. Job 1 is completed and sold for $276,500. Job 2 is completed and not yet delivered. Job 3 is still in process. The entry for Job 2 is:
   A. Dr. Accounts Receivable, Cr. Sales
   B. Dr. Cost of Sales, Cr. Work in process
   C. Dr. Finished Goods inventory, Cr. Work in process
   D. Dr. Work in process, Cr. Finished Goods inventory
   E. none of the above.
Lesson 3: Cost Accumulation for Job-Shop and Batch Production Operations

9. JVC Company has three jobs outstanding. The company uses normal costing, and the overhead rate, which is based on machine hours, amounts to $96 per machine hour based on a forecast of 4,000 hours. Job 1 with a direct cost of $94,300 has used 1,290 machine hours. Job 2 with a direct cost of $74,700 has used 1,760 machine hours. Job 3 with a direct cost of $87,470 has used 789 hours. Actual overhead amounts to $375,000. The under/over applied overhead is:
   A. $6,456 underapplied
   B. $6,456 overapplied
   C. $15,456 underapplied
   D. $15,456 overapplied
   E. none of the above.

10. A Gantt chart is used for:
   A. comparing job order costing to operational costing
   B. comparing time frame of forecast to actual
   C. assessing progress of work toward completion
   D. both A and B
   E. both B and C.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Lesson 4: Activity-Based Costing Systems

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

- Describe how traditional costing could lead to undercosting or overcosting products
- Discuss the refinement process of traditional costing systems (ABC system)
- Identify the different levels of resources and activities used in production processes
- Estimate the cost of activities, and calculate a cost-driver rate
- Assign activity costs to goods and services
- Analyze the profitability of products and customers
- Apply activity-based costing to service and merchandising
- Distinguish between activity-based costing, unit-level costing, and ABC full costing of goods and services

Key Terms

Understand key terms on page 165 of Hilton, Maher, & Selto.

Lesson Introduction

Activity-based costing is a process by which an organization can more accurately distribute overhead costs. In the prior chapter, the application of overhead was discussed in detail. The method is commonly labeled as “traditional costing” and is often called the “big pot” theory. “Big pot” means that all costs for overhead are accumulated in one account, and then the contents are simply distributed evenly over all units that are produced. The theory assumes that every unit produced uses every resource in the account evenly and should be distributed an equal portion of the account.
Activity-based costing (ABC) is a more accurate distribution of the contents of the pot. ABC takes the pot and divides it into what is called cost pools (little sections). Then it distributes the content of the pools only to the units that actually move through that pool. It does not make the assumption that every unit moves through every pool nor that the units move through the individual pools evenly.

ABC is a cost-tracing concept. In the previous chapter you should have understood that direct materials and direct labor are labeled as such because they are traceable to the end unit of product. However, it was assumed that overhead consisted of indirect costs that were not able to be traced. This assumption gave rise to the arbitrary allocation process that was performed previously for overhead. Under ABC costing, the assumption is that most of the overhead cost can indeed be traced and should be traced and distributed to the units that actually use the traceable cost. More often than not, the distribution of cost is not an even allocation. Units that are complicated to process and often require more resources are accurately accounted for.

An important thing to remember is that the entire content of the overhead pot is the same under both methods. Traditional costing is simpler, with one pot and one distribution factor (activity base). ABC divides the contents of the pot into little pools and each pool can have its own distribution factor (activity base). Classifying resources into cost hierarchies aids in the pooling process. Focus on understanding the levels of cost hierarchy as you go through the chapter.

Both methods of allocating costs have their advantages and disadvantages. One advantage for traditional costing is that it is simple to apply. However, the downside is that it may not be completely accurate for product costing and pricing. One advantage for ABC costing is that it is much more accurate for costing and pricing, but disadvantages are that it can be costly to implement and requires a very good understanding of processes by management and employees for accurate pooling.

As you read through this chapter, make sure that you follow the exhibits closely and recalculate the numbers. ABC is not a hard concept to grasp, but it is important that you give proper attention to the detail.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 4, pages 142–165
Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 4 “Chapter Highlights” on pages 61–65 in the SG.
2. Complete “Review and Self Test Questions and Exercises” on pages 66–75. You may check your answers on pages 76–79.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. Facility-level resources are:
   A. acquired for individual units of product or service
   B. acquired for making a group of similar products
   C. acquired to produce and sell a specific product
   D. acquired to serve specific customers
   E. acquired to provide a general capacity to produce products and services.

_____ 2. Unit-level resources are:
   A. acquired for individual units of product or service
   B. acquired for making a group of similar products
   C. acquired to produce and sell a specific product
   D. acquired to serve specific customers
   E. acquired to provide a general capacity to produce products and services.

_____ 3. Examples of facility-level activities are:
   A. central administration, legal services, finance, and accounting
   B. human resources, security, and custodial services
   C. advertising, promotion, material supply, and product design
   D. all of the above
   E. both A and B.
Lesson 4: Activity-Based Costing Systems

4. Examples of customer-level activities are:
   A. setting up machines and beginning production run
   B. removing pieces and inspecting them
   C. invoicing, packaging, and shipping
   D. all of the above
   E. both A and B.

5. An appropriate cost-driver base should:
   A. have a cause-and-effect relationship with the activity and the use of resources
   B. predict or explain the activity’s use of resources with reasonable accuracy
   C. be based on the practical capacity of the resource to support activities
   D. all of the above
   E. both A and B.

6. XY Company produces products X and Y. The direct cost of X is $250 per unit and the direct cost of Y is $350 per unit; 50 units of X and 150 units of Y were produced. Overhead amounting to $130,000 is allocated to products using direct costs as the relevant cost driver. Cost of X per unit amounts to:
   A. $750
   B. $1,000
   C. $1,250
   D. $1,500
   E. none of the above.

7. XY Company produces products X and Y. The direct cost of X is $250 per unit ($100 materials and $150 labor) and the direct cost of Y is $350 ($230 material and $120 labor) per unit; 50 units of X and 150 units of Y are produced. Overhead amounts to $130,000 and is composed of material handling ($12,000), labor support ($60,000), machine operation ($48,000), and general administration ($10,000). Material-handling cost driver is material cost; labor-support cost driver is labor cost. Machine-operation cost resulted from running the machines a total of 480 hours (75% for product X and 25% for product Y). General administration effort related equally to X and Y. Material handling chargeable per unit of X (rounded) amounts to:
   A. $30.00
   B. $50.00
   C. $60.00
   D. $70.00
   E. none of the above.
Lesson 4: Activity-Based Costing Systems

_____ 8. ABC full costing:
A. is consistent with the theory of constraints
B. traces only the costs of unit-level resources supplied
C. traces only the costs of unit-level resources supplied and used
D. both A and C
E. none of the above.

_____ 9. ABC unit-level costing:
A. shows how the organization uses all of its resources to produce products and services
B. may not show an accurate measure of adding or deleting a product
C. shows which higher level resources are used to produce a specific output
D. all of the above
E. none of the above.

Instructions: Use the following data to respond to questions 10–14.

Consider the following facts for NM Company which produces products N and M.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Driver</th>
<th>N's Share</th>
<th>M's Share</th>
<th>Unused</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set-ups</td>
<td># of set-ups</td>
<td>10</td>
<td>40</td>
<td>5</td>
<td>$5,000</td>
</tr>
<tr>
<td>Ordering</td>
<td># of orders</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>3,200</td>
</tr>
<tr>
<td>Receiving</td>
<td># of receipts</td>
<td>22</td>
<td>12</td>
<td>6</td>
<td>2,400</td>
</tr>
<tr>
<td>Product dev.</td>
<td># of parts</td>
<td>180</td>
<td>120</td>
<td>100</td>
<td>2,800</td>
</tr>
<tr>
<td>Gen. Mgmt.</td>
<td># of labor hours</td>
<td>2,900</td>
<td>4,100</td>
<td>1,000</td>
<td>7,200</td>
</tr>
<tr>
<td>Security</td>
<td>area covered (sq. ft.)</td>
<td>3,200</td>
<td>5,400</td>
<td>400</td>
<td>9,000</td>
</tr>
<tr>
<td>Materials</td>
<td># of units prod.</td>
<td>400</td>
<td>800</td>
<td>-</td>
<td>120,000</td>
</tr>
<tr>
<td>Labor</td>
<td># of DL hours</td>
<td>1,700</td>
<td>3,100</td>
<td>1,200</td>
<td>56,000</td>
</tr>
</tbody>
</table>

_____ 10. Set-up cost chargeable per unit of N ignoring the unused capacity amounts to:
A. $2.50
B. $2.75
C. $5.00
D. $5.50
E. none of the above.
Lesson 4: Activity-Based Costing Systems

_____ 11. Ordering cost chargeable per unit of N accounting for unused capacity amounts to:
   A. $2.00  
   B. $2.67  
   C. $3.00  
   D. $4.00  
   E. none of the above.

_____ 12. General management cost per unit of N ignoring unused capacity costs (rounded) amount to:
   A. $4.61  
   B. $5.27  
   C. $6.53  
   D. $7.46  
   E. none of the above.

_____ 13. Overhead cost per unit of N using ABC full costing (rounded) amounts to:
   A. $20.25  
   B. $22.31  
   C. $25.25  
   D. $27.25  
   E. none of the above.

_____ 14. The cost of unused capacity amounts to:
   A. $3,260  
   B. $3,660  
   C. $14,460  
   D. $14,815  
   E. $16,260.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Hilton, Maher, & Selto:   Exercise 4.31, page 168;  
Exercise 4.32, page 168;  
Exercise 4.33, page 168;  
Exercise 4.36, page 169;  
Exercise 4.38, page 170
Lesson 5: Activity-Based Management

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Understand the key steps of an activity-based management system
✓ Demonstrate how to use activity-based costing for target costing
✓ Identify and measure the costs of activities that do or do not add value in organizations
✓ Use the elements of an ABM system to help to identify opportunities for process improvements
✓ Evaluate capacity utilization by identifying resources supplied and resources used
✓ Understand the methods and the problems of implementing ABC and ABM

Key Terms

Understand key terms on page 202 of Hilton, Maher, & Selto.

Lesson Introduction

Activity-based management (ABM) is a concept that looks at efficiency through the minimization of costs. The process focuses on activities, how activities are performed by businesses, and how costs and values of activities are ranked.

In Chapter 4, you focused on activity-based costing and cost pools (groupings of similar activities) and the distribution of the pools. In ABM, the concepts of value-added and non-value-added activities will be introduced and explained. In determining which activities are value-added, it is important to keep in mind that the customer perspective is the overriding determinant. Over time, value-added activities can change and often shift to the non-value-added category. The concepts are not static.
Lesson 5: Activity-Based Management

Controlling costs is often achieved by evaluating activities, determining whether they are value-added or non-value-added, and minimizing or eliminating those that are classified as non-value-added. The ultimate goals of the process are for the organization to become more efficient in its operations through reengineering and refinement, to reduce inefficient and undesired costs, and to achieve desired profits.

Reading Assignment

Hilton, Maher, & Selto, Chapter 5, pages 184–202

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 5 “Chapter Highlights” on pages 81–88 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. Activity-based management determines:
   A. the organization’s cost drivers and cost-driver rates for each activity
   B. value-added and non-value-added activities
   C. opportunities to enhance value-added activities and reduce or eliminate non-value-added activities
   D. all of the above
   E. both B and C.
2. Activity-based costing provides information about:
   A. use of resources
   B. identifying opportunities for decreasing costs
   C. considering ways to increase value
   D. all of the above
   E. both B and C.

3. In ABC, costs are often divided into:
   A. unit-level and batch-level costs
   B. product-level and facility-level costs
   C. value-added and non-value-added costs
   D. all of the above
   E. both A and B.

4. ABC Company’s selling price of $480 for its product A is 20% higher than its current cost. What is the product’s current cost?
   A. $400
   B. $480
   C. $560
   D. $600
   E. none of the above

5. ABC Company’s cost of $480 for its product A is 20% lower than its current selling price. What should be the product’s cost if it expects a return of 30% on sales?
   A. $280
   B. $384
   C. $400
   D. $420
   E. none of the above

6. Robert Painting Company’s major activities include painting, transportation of workers to the work site, storing of paint in the shop, and supervision of the workers. Non-value-added activities include:
   A. transportation of the workers
   B. storing of paint
   C. painting
   D. all of the above
   E. both A and B.
Lesson 5: Activity-Based Management

7. Robert Painting Company has terminated its job supervisors. Each supervisor supervised eight workers and cost the company $5,375 a month. Robert has gone on different sites and nurtured workers for higher levels of responsibility and accountability. Workers have agreed to receive $1.50 more per hour and be totally accountable for timely completion of each project without the need for a supervisor. The average working hours per month are 140 hours. Due to the slow-down, Robert has currently one crew of workers. Net benefit of this improvement amounts to:
   A. $1,680
   B. $3,695
   C. $4,295
   D. $5,375
   E. none of the above.

8. Value-added activities enhance the value of products and services in the eyes of the:
   A. employees
   B. customers
   C. managers
   D. shareholders
   E. none of the above.

Use the following information to answer questions 9 and 10.

Robert’s consultant has ranked his workers’ tasks in the following order, with the most non-value-added task receiving a ranking of 1.

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
<th>Hourly Rate</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painting</td>
<td>800</td>
<td>$25/ hr</td>
<td>4</td>
</tr>
<tr>
<td>Warehouse management</td>
<td>150</td>
<td>$20/ hr</td>
<td>2</td>
</tr>
<tr>
<td>Transportation</td>
<td>75</td>
<td>$16/ hr</td>
<td>1</td>
</tr>
<tr>
<td>Workers’ monthly party</td>
<td>one</td>
<td>$600/ occasion</td>
<td>3</td>
</tr>
</tbody>
</table>

9. If Robert succeeds in eliminating the lowest non-value-added task, it would save him:
   A. $3,000
   B. $4,200
   C. $4,800
   D. $5,200
   E. none of the above.
10. The three non-value-added tasks as a percentage of value-added activity amounts to:
   A. 24%
   B. 21%
   C. 19.35%
   D. 17.25%
   E. none of the above.

11. Value-added activities may include:
   A. reprocessing payments
   B. set-up of machines
   C. moving and storing products
   D. all of the above
   E. none of the above.

12. Activity-based costing is suitable for:
   A. manufacturing entities
   B. service entities
   C. governmental units
   D. all of the above
   E. both A and B.

13. A pilot project is a project that is:
   A. limited in scope
   B. intended to be a small-scale model of a larger project
   C. applicable only in ABM
   D. all of the above
   E. both A and B.

**Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.**

Hilton, Maher, & Selto: Exercise 5.23, page 205;
Exercise 5.25, page 205;
Exercise 5.26, page 206;
Exercise 5.27, page 206;
Exercise 5.28, page 206
Lesson Objectives

After you have completed this lesson, you should be able to do the following:

 ✓ Determine which organizations should use process costing or job costing
 ✓ Explain why process-costing information is useful for decision making
 ✓ Describe the five-step method to assign process costs to products
 ✓ Analyze the process costs assigned to products using weighted-average (WA) costing
 ✓ Account for costs transferred between processes
 ✓ Analyze and manage “normal” and “abnormal” spoilage
 ✓ Analyze the process costs assigned to products using first-in, first-out (FIFO) costing
 ✓ Compare and contrast the results from WA and FIFO costing

Key Terms

Understand key terms on page 326 of Hilton, Maher, & Selto.

Lesson Introduction

This lesson covers Chapter 8 in your textbook. Chapters 6 and 7 have been intentionally omitted from this course. Process costing is another method used by organizations to track costs. This method does not track cost by job (as in Chapter 3) but rather by time period or department. When products are heterogeneous (alike), it is unnecessary and costly to track individual units. Instead, the cost is tracked as a group and simply allocated over everything produced in the period or department.

It is important to note that the types of costs tracked are the same under both methods: direct materials, direct labor, and manufacturing overhead. For purposes of brevity, most texts track labor and overhead together as conversion costs (CC). In this chapter, we will follow that methodology.
Lesson 6: Process-Costing Systems

There are three ways to calculate costs per unit and assign costs to inventories under process costing: weighted average (WA); first in, first out (FIFO); and operation. Operation will not be covered in this course. It is a hybrid method of WA and FIFO and is covered in Appendix B of the text (pages 324–326).

You should first focus on developing a clear understanding of WA costing. This costing method averages work performed on and costs spent on products during all periods. It combines work performed on units in prior periods (beginning work in process, or BWIP) with current period work. It also combines costs from both periods. It then divides the units into the costs to determine per-unit cost.

Important in this computation is the idea of equivalent units of production (EUP). EUP is simply a conversion computation. It converts partially completed units to whole units that could have been completed with the same amount of resource inputs. Make sure that you understand and recompute to every number shown in the exhibits throughout the chapter.

Once you have a full understanding of WA costing, the second area of focus should be FIFO costing found in Appendix A of the text (pages 317–323). The computations of EUP and unit costs are very similar to the ones performed in WA. The exception is that FIFO does not combine unit work and costs from prior periods with current work and costs. Look very closely at the exhibits and the computations. You will see that no work performed on units in the prior period (BWIP) is included in the EUP calculation and that the prior period (BWIP) cost is not included in the cost per unit calculation. FIFO costing is generally preferred because this method gives more current cost-per-unit data and inventory values.

The third area of focus should be on transferred-in costs, discussed on textbook pages 310–312. Many operations have more than one department involved in the production of units. Transferred-in costs are costs that are incurred in a previous department and follow the units into the subsequent department. It is not difficult to master. Transferred-in costs are simply handled by adding another column of computations for EUP.

Finally, in most processes, units get “messed up.” These are called “spoiled” units. Spoilage can either be expected (normal) or unexpected (abnormal). Either way, the spoiled units use resources that need to be accounted for. The normal spoilage should follow along with the good completed units. The thought is that the organization had to “mess up” some units to get the good ones completed. So the cost of the normal spoilage is averaged into the inventory cost of the good finished units.

Abnormal spoilage is not treated this way. Since abnormal spoilage is unexpected, the units are rendered unsalable in the current state and the costs associated must be expensed in the period in which they occur.

In the cost-flow concept, normal spoilage costs get transferred from WIP to finished-goods inventory with the good units and eventually expensed as cost
of goods sold when the units are actually sold. Abnormal spoilage costs get expensed right away on the income statement in the period during which it occurs. These costs are not transferred into inventory to wait later expensing as cost of goods sold. Pages 312 and 313 of the text offer a great example of spoilage and should be reviewed in detail.

In this chapter you will encounter several journal entries. Make sure that you understand the debits and credits. The chapter has several challenging concepts. Spend the time on the front end by reading slowly and re-computing numbers in exhibits. Then attempt the study guide problems. Working the problems several times should reinforce the concepts for later testing.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 8, pages 298–323 (including Appendix A but omitting Appendix B)

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 8 “Chapter Highlights” on pages 141–147 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. In process costing:
   A. only high level costs are assigned to products; all other costs are traced
   B. only low level costs are assigned to products; all other costs are traced
   C. all costs are assigned to products
   D. all costs are traced to products
   E. none of the above.

_____ 2. Abalone Company has used $2,450 worth of materials and $3,760 in conversion costs for the production of 500 units of Aba. Cost per unit amounts to:
   A. $4.90
   B. $7.52
   C. $12.42
   D. $12.50
   E. none of the above.

_____ 3. Abalone Company has used $2,450 worth of materials and $3,760 in conversion costs for the production of 500 units of Aba. The product costs so determined have managerial implications in:
   A. resource spending
   B. resource use
   C. quality engineering
   D. both A and B
   E. none of the above.
4. The five steps in process costing include:
   A. beginning inventory, costs added, units completed, ending inventory, and spoilage
   B. units to account for, units accounted for, equivalent number of units, costs to account for, and unit costs
   C. unit reconciliation, equivalent number of units, cost of work in process beginning, costs added during the period, and unit cost
   D. unit reconciliation, equivalent number of units, costs to account for, cost per unit, and costs accounted for
   E. none of the above.

5. Arman Manufacturing Company produces office chairs. Work in process beginning includes 30 units which were 80% complete with regard to material and 60% complete with regard to conversion. The cost of work in process beginning was $3,000—60% of which was for materials; 200 units were added during the period at a cost of $28,000—70% of which was for materials. WIP ending amounted to 60 units which were 90% complete with regard to materials and 40% complete with regard to conversion. Material cost per unit for prior period amounts to:
   A. $66.67
   B. $75.00
   C. $95.54
   D. $98.00
   E. none of the above.

6. Arman Manufacturing Company produces office chairs. Work in process beginning includes 30 units which were 80% complete with regard to material and 60% complete with regard to conversion. The cost of work in process beginning was $3,000—60% of which was for materials; 200 units were added during the period at a cost of $28,000—70% of which is for materials. WIP ending amounted to 60 units which were 90% complete with regard to materials and 40% complete with regard to conversion. Material cost per unit using weighted average price method amounts (rounded) to:
   A. $66.67
   B. $75.00
   C. $95.54
   D. $98.00
   E. none of the above.
Lesson 6: Process-Costing Systems

7. Arman Manufacturing Company produces office chairs. Work in process beginning includes 30 units which were 80% complete with regard to material and 60% complete with regard to conversion. The cost of work in process beginning was $3000—60% of which was for materials; 200 units were added during the period at a cost of $28,000—70% of which is for materials. WIP ending amounted to 60 units which were 90% complete with regard to materials and 40% complete with regard to conversion. Conversion cost per unit using FIFO method amounts (rounded) to:
   A. $47.73
   B. $49.48
   C. $56.27
   D. $66.67
   E. none of the above.

8. If costs change from period to period, using which method is suitable for decision making?
   A. weighted average price
   B. FIFO
   C. LIFO
   D. either A or B
   E. none of the above

9. Including spoilage as part of the cost of goods completed:
   A. has the advantage of highlighting cost of spoilage
   B. hides the cost of spoilage
   C. provides a better picture of true cost of products
   D. both B and C
   E. none of the above

10. Costs transferred in from another department in a process costing environment are treated as:
    A. a separate cost item in the new department
    B. an addition to material costs in the new department
    C. an addition to conversion costs in the new department
    D. partly material and partly conversion cost in the new department
    E. none of the above.
Use the information below to answer questions 11–17.

Saba Plastics has a beginning work-in-process inventory of 250 yards, 100% complete with regard to material and 80% complete with regard to conversion; 9,250 yards were added during the period; 7,200 yards were completed and transferred out. Normal spoilage amounted to 5% of completed units. Abnormal spoilage amounted to 490 yards, caused primarily because of malfunctioning machines in this time period. WIP end of the period was 80% complete with regard to materials and 60% complete with regard to conversion costs. The cost of WIP beginning was $3,500, of which $1,000 was for conversion costs. Current total added costs amount to $132,280 of which $37,410 was for conversion costs.

**11.** Equivalent number of units using FIFO for materials amounts to:
A. 8,760
B. 8,900
C. 8,960
D. 9,200
E. none of the above.

**12.** Equivalent number of units using weighted average for conversion costs amounts to:
A. 8,700
B. 8,920
C. 8,950
D. 9,200
E. none of the above.

**13.** Cost per unit of material using FIFO amounts (rounded) to:
A. $10.59
B. $10.60
C. $11.03
D. $11.76
E. none of the above.

**14.** Cost per unit of conversion costs using FIFO method amounts (rounded) to:
A. $4.29
B. $4.32
C. $4.50
D. $4.80
E. none of the above.
Lesson 6: Process-Costing Systems

15. Cost per unit of completed goods using FIFO, assuming that normal spoilage is considered as part of cost of goods completed, amounts (rounded) to:
   A. $14.90
   B. $15.62
   C. $16.55
   D. $17.56
   E. none of the above.

16. Abnormal spoilage costs using the FIFO method amount (rounded) to:
   A. $3,286
   B. $4,619
   C. $5,194
   D. $7,291
   E. none of the above.

17. Cost of work in process ending using the FIFO method amounts (rounded) to:
   A. $23,891
   B. $17,914
   C. $16,017
   D. $12,720
   E. none of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Examination I

Preparation

It is now time to prepare for and take Examination I. If you are not going to take your exam at LSU-Baton Rouge, notify us of your proctor by sending the completed Exam Proctor Information Form located in the appendix of this course guide to the Independent & Distance Learning office.

Please read the College Examination Information instructions located in the appendix of this course guide for further details.

About Examination I

Examination I will cover Lessons 1 through 6 and consists of 40 multiple choice questions and 1 long problem. The exam will be worth 100 points. The multiple choice questions will be worth 2 points each, and the long problem worth 20 points. You will have three hours to complete the exam. You may not use graphing calculators for the exam; a financial or business calculator is acceptable.

NOTE: The listing below is intended to help guide your study. However, it is not intended to suggest that this is the entirety of the testable materials. Any material from the textbook (chapter narratives and end-of-chapter materials), the study guide, and the course guide (self check and lesson assignments) is valid for exam coverage.

Make sure that you understand the concept, computation, and application of theory for the following:

Lesson 1 – Cost Management and Strategic Decision Making:
  • Understand what a cost is
  • Understand the concept of cost management
  • All new terminology
  • The purpose of cost accounting
  • Concepts of value-added and non-value–added items
Lesson 2 – Product Costing Systems: Concepts and Design Issues:
• Terminology and application of cost concepts
• The cost of goods manufactured; meaning and preparation
• Cost flow concepts and related journal entries
• Variable and fixed cost behavior; total and unit-basis
• Variable and absorption costing methods and calculations
• Prime and period cost classifications

Lesson 3 – Cost Accumulation for Job-Shop and Batch Operations
• Cost flow and journal entries (continued from previous chapter)
• Job-order tracking of costs
• Manufacturing overhead computation and application
• Valuation of inventory levels
• Calculation of net income with related income tax effects

Lesson 4 – Activity Based Costing Systems
• Detail allocation of overhead costs from traditional costing method to traceable ABC method
• Cost pools
• Cost pool rate
• Assignment of cost
• Hierarchy of costs
• Examples of cost hierarchy levels

Lesson 5 – Activity Based Management
• Concept of value-added and non-value-added activities
• Ranking non-value-added and value-added departments
• Controlling costs to become more efficient

Lesson 6 – Process Costing Systems
• Equivalent units of production; WA and FIFO
• Spoilage
• Calculation and format of the production report
• Valuation of manufactured and ending WIP inventories

If you prepare diligently, you should do well. Good luck!
Lesson 7: Joint-Process Costing

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Use cost-management information to increase profits from using scarce resources of joint-production processes
✓ Use cost-management data in the sell-or-process further decision
✓ Explain why organizations allocate joint costs
✓ Understand how to use joint-cost allocation methods (net-realizable-value and physical-measures) and why one way or the other may be preferred
✓ Know how to account for by-products
✓ Review other methods of cost allocation (relative sales value at split-off and constant gross margin percentage) and know what they mean

Key Terms

Understand key terms on page 356 of Hilton, Maher, & Selto.

Lesson Introduction

Many organizations find themselves in the position of producing more than one product (output) from a single input. This single input has costs associated with it. In Chapter 9 we will explore ways to distribute this single input cost to the multiple different outputs.

Consider the following example:

Look at your hand. Think of the wrist and palm as the single input that feeds the thumb and fingers. The palm has a cost associated with it, and you cannot get to the appendages without putting resources into the palm first. The palm is what is described as the single input and labeled as the joint-processing stage and cost (JC).

The first knuckle is the point where each finger and thumb becomes an identifiable individual product. The knuckle is called the split-off point (SO).
Lesson 7: Joint-Process Costing

Some organizations choose to sell the product at this split-off point (sales value at split-off) or work on it more to make it another or better product.

To get to the nail on the end, more costs have to be incurred or spent. These additional costs are called separable costs (SC) or further processing costs (FPC). The tip of the finger and the nail becomes the new end product and can often be sold for a different price (new selling price).

Here is the organizational challenge. How should an organization distribute the joint cost?

The separable or further processing cost is easy because it can be identified or traced to the individual products so there is no question where the cost goes. But joint costs are a different issue. There are several different ways that an organization can choose to distribute the joint costs.

Four methods for distribution of this joint cost are covered in the text. The major focus will be on three of them: net realizable value (NRV), physical measure (quantities), and relative sales value at split-off (RSVSO), shown in the chapter appendix. The constant gross margin is the fourth method shown in the appendix, but it will not be covered for testing purposes.

One final concept of this chapter is by-products. By-products represent minor products that are generated from the production of the main product. They usually have little value but still must be accounted for. They can either be set up as individual revenue-generating products, or they can be treated as generating revenue but deducted from the cost of the main product; reimbursement of cost might be a more understandable term than revenue.

Increasingly, more uses are being found for by-products. By-product outputs that were once considered waste are now finding a consumer market of their own. For example, denim fabric scraps from jeans used to be discarded. Now they are being shredded and used to make wall insulation.

It’s amazing what an open and imaginative mind can come up with.

Let’s meet the challenge!

Reading Assignment

Hilton, Maher, & Selto, pages 340–356 (include appendix; omit “Constant Gross Margin Percentage Method,” page 356)
Lesson 7: Joint-Process Costing

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self check activities for grading.

1. Read and review Chapter 9 “Chapter Highlights” on pages 161–166 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. The managerial decisions in joint process costing include:
   A. whether to initiate the joint process
   B. what allocation method to use
   C. whether to process the joint products further or not
   D. all of the above
   E. both A and C.

_____ 2. APC Company produces three products, A, P, and C, as a result of a joint process with a cost of $199,500 in quantities of 2,000, 3,000, and 5,000 pounds. Product A can be sold for $47.50; P for $39; and C for $2.50 a pound. The decision at the split-off point should be to:
   A. produce A only
   B. produce A and P
   C. produce A, P, and C
   D. not produce any if all costs can be avoided
   E. none of the above.
Lesson 7: Joint-Process Costing

3. APC Company produces three products, A, P, and C, as a result of a joint process with a cost of $199,500 in quantities of 2,000, 3,000, and 5,000 pounds. Product A can be sold for $47.50; P for $39; and C for $2.50 a pound. Product A can be sold as it is or processed further at a cost of $13,000 and sold for $57 a pound. However, the volume would shrink by 10% as a result of this process. What decision should APC Company make about Product A?
   A. Product A must be further processed because its price is $9.50 more per pound.
   B. Product A must not be further processed because its volume shrinks by 200 pounds.
   C. Product A must be further processed because it increases profit by $5,400.
   D. Product A must not be further processed because it decreases profit by $5,400.
   E. none of the above

4. GMC’s output, as a result of a joint process costing $178,400, is 3,400 of G at $62 a unit, 4,400 of M at $23 a unit, and 2,200 of C at $18 a unit. Using physical measures to allocate joint costs results in:
   A. $60,656 charge to G
   B. $51,344 charge to M
   C. $19,824 charge to C
   D. $17,890 charge to C
   E. none of the above.

5. GMC’s output, as a result of a joint process costing $178,400, is 3,400 of G at $62 a unit, 4,400 of M at $23 a unit, and 2,200 of C at $18 a unit. These prices are all after additional processing which costs $81,600; $40,800 of this sum is for G, $31,200 is for M, and the balance is for C. Using NRV method, the amount chargeable to M should be:
   A. $78,496
   B. $70,000
   C. $51,344
   D. $46,252
   E. $39,784.
6. GMC’s output, as a result of a joint process costing $178,400, is 3,400 of G at $62 a unit, 4,400 of M at $23 a unit, and 2,200 of C at $18 a unit. These prices are all after additional processing which cost $81,600; $40,800 of this sum is for G, $31,200 is for M, and the balance is for C. GMC considers C as a by-product although the controller strongly objects to the practice because of the relatively high value of the product. The amount chargeable to G, using the physical measures, after by-product rebate, amounts to:
A. $60,502
B. $64,687
C. $78,298
D. $83,713
E. none of the above.

7. GMC’s output, as a result of a joint process costing $178,400, is 3,400 of G at $62 a unit, 4,400 of M at $23 a unit, and 2,200 of C at $18 a unit. These prices are all after additional processing which cost $81,600; $40,800 of this sum is for G, $31,200 is for M, and the balance is for C. GMC considers C as a by-product although the controller strongly objects to the practice because of the relatively high value of the product. The amount chargeable to M, using NRV method, should be:
A. $43,283
B. $46,259
C. $105,117
D. $112,321
E. none of the above.

8. GMC’s output, as a result of a joint process costing $178,400, is 3,400 of G at $62 a unit, 4,400 of M at $23 a unit, and 2,200 of C at $18 a unit. These prices are all after additional processing which cost $81,600; $40,800 of this sum is for G, $31,200 is for M, and the balance is for C. Using NRV method, the gross margin on G amounts to:
A. $240,000
B. $109,344
C. $57,674
D. $46,259
E. none of the above.
Lesson 7: Joint-Process Costing

____  9. Using physical measures in joint-cost allocation may be appropriate when:
   A. sales values differ substantially among the joint products
   B. additional processing is often required to make the product sellable
   C. there is more than one physical measure for each product to consider
   D. some of the joint products have little sales value
   E. none of the above.

____  10. By-product net sales value may be:
   A. credited to production at the point of manufacture
   B. credited to production at the point of sale
   C. credited to other revenue at the point of production
   D. credited to other revenue at the point of sale
   E. all of the above.

____  11. Costs are allocated to joint products in different ways. Which one of the following is a good reason for cost allocation?
   A. evaluate the cost center's performance
   B. measure income and assets for internal reporting
   C. control expenditures
   D. budget and cash control
   E. none of the above

____  12. Which of the following is/are not a method to allocate joint costs?
   A. net realizable value
   B. sales value at split-off point
   C. physical measures
   D. relative profitability
   E. A, B, and C

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Hilton, Maher, & Selto: Exercise 9.26, page 359;
   Exercise 9.28, page 359;
   Exercise 9.29, page 359;
   Exercise 9.30 (part 1 only), page 359;
   Exercise 9.35, page 361
Lesson 8: Managing and Allocating Support-Service Costs

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Explain the importance of managing support service costs and the reason these costs are allocated
✓ Understand the need to choose single or multiple cost pools and to separate the cost of resources supplied from the cost of resources used
✓ Illustrate how to choose appropriate allocation bases
✓ Illustrate two methods used to allocate support department costs—the direct and the step
✓ Evaluate the consequences of choosing among the cost allocation methods

Key Terms

Understand key terms on page 397 of Hilton, Maher, & Selto.

Lesson Introduction

The first question to answer in Chapter 10 is, “What is a service department?” A service department is a division of an organization that provides information or support to others. The customer can be either internal or external. It is fairly easy to determine what to do with cost if the services go to external customers, but what happens when a department gives service to another within its own organization? Service departments simply incur costs but really have no means to generate revenue to pay for these costs. The beneficiaries of the costs are others. So these “others” should have the costs passed on to them for coverage.
Lesson 8: Managing and Allocating Support-Service Costs

There are three methods for allocating service department costs: direct, step (step-down), and reciprocal. The reciprocal is covered in the appendix but will not be covered on the exam. You will only be responsible for knowing the direct and step methods.

The overall focus for the chapter is that service departments exist for the benefit of other departments. Usually the service provided is more efficiently administrated through centralization of the activity within organizations. Resources are used to provide the services. These resources (costs) usually need to be passed on to the beneficiary departments. Proper allocation is the dilemma. Just as we asked the question of allocation bases and proper (“fair”) allocation in Chapter 4 on ABC costing, similar issues exist in distributing service department costs.

One method used to allocate cost is the direct method. This method avoids the services provided to other service departments and distributes costs straight (directly) to the production departments (users of the services).

Another method used is the step method. The step method ranks service departments first. It determines the service department that provides the greatest amount of service and so on. This method ranks the departments from highest to lowest provider of service followed by production departments. The distribution begins with the highest provider of service and steps down to the departments until all service departments are distributed and only production departments are left with costs in them. Once a service department has been distributed to those departments lower, it is closed and will not receive any costs from other departments.

Probably a more accurate distribution method is the reciprocal method. It considers all services provided to other service departments and production departments. You should take a few minutes and go over the example in the appendix. It will not be tested, but you could be in a career position later that could use this method.

Reading Assignment

Hilton, Maher, & Selto, Chapter 10, pages 370–393 (omit appendix)
Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 10 “Chapter Highlights” on pages 179–187 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

1. The reason(s) stated for cost allocation often include(s):
   A. the requirements for tax regulations and financial accounting
   B. determination of the fair value of cost-plus contracts for reimbursement purposes
   C. influencing management’s behavior in cost control
   D. choosing a basis even though it may appear somewhat arbitrary
   E. all of the above.
Lesson 8: Managing and Allocating Support-Service Costs

Use the following data to respond to questions 2–11.

Omid Printing has two service departments (S1 and S2) and two manufacturing departments (M1 and M2). S1 is allocated based on number of employees. S2 is allocated based on maintenance hours. The company produces two products (P1 and P2). P1 uses $167 of labor and material. It uses 1.2 machine hours in M1 and 2.8 labor hours in M2. P2 has the same labor and material cost but uses 3.2 machine hours in M1 and 1.6 labor hours in M2. Other data follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>S1</th>
<th>S2</th>
<th>M1</th>
<th>M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>15</td>
<td>25</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Maintenance hours</td>
<td>100</td>
<td>200</td>
<td>600</td>
<td>1,900</td>
</tr>
<tr>
<td>Direct overhead</td>
<td>$32,000</td>
<td>$68,000</td>
<td>$495,000</td>
<td>$984,000</td>
</tr>
<tr>
<td>Machine hours</td>
<td>-</td>
<td>-</td>
<td>2,400</td>
<td>-</td>
</tr>
<tr>
<td>Direct labor hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,800</td>
</tr>
</tbody>
</table>

2. Using direct allocation, S1 charge to M1 amounts to:
   A. $9,600
   B. $16,320
   C. $22,400
   D. $51,680
   E. none of the above.

3. Using direct allocation, S2 charge to M1 amounts to:
   A. $9,600
   B. $16,320
   C. $22,400
   D. $51,680
   E. none of the above.

4. Using direct allocation, M1’s overhead rate per hour amounts to:
   A. $217.05
   B. $157.05
   C. $120.24
   D. $102.24
   E. none of the above.
5. Using direct allocation, P1’s product cost per unit (rounded) amounts to:
A. $597
B. $764
C. $887
D. $1,056
E. none of the above.

6. Using direct allocation, P2’s share of overhead per unit (rounded) amounts to:
A. $597
B. $764
C. $887
D. $1,056
E. none of the above.

7. If the step-allocation method is used:
A. S1 should be allocated first because it provides more service to S2
B. S2 must be allocated first because it provides more service to S1
C. S1 should be allocated first because it is the order that the problem assumes
D. S2 should be allocated first because it has a higher total amount than S1
E. none of the above.

8. Using step allocation and assuming that S2 is allocated first, M1 share of S2 (rounded) amounts to:
A. $10,383
B. $15,694
C. $24,228
D. $49,694
E. none of the above.

9. Using step allocation and assuming that S2 is allocated first, M1 share of S1 (rounded) amounts to:
A. $10,383
B. $15,694
C. $24,228
D. $49,694
E. none of the above.
Lesson 8: Managing and Allocating Support-Service Costs

____ 10. Using step allocation and allocating S2 first, overhead rate per hour for M2 amounts to:
A. $110.22
B. $120.22
C. $207.12
D. $217.12
E. none of the above.

____ 11. Using step allocation and allocating S2 first, cost per unit of P2 (rounded) amounts to:
A. $764
B. $864
C. $954
D. $1,054
E. none of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 10.21, page 401;
Exercise 10.25, page 402;
Exercise 10.26, pages 402–403;
Exercise 10.28 page 403
Lesson 9: Cost Estimation

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Explain why companies need to estimate the relation between costs and cost drivers
✓ Graph cost patterns when they are fixed, step (semi-variable), and variable
✓ Estimate and use learning curve cost predictions
✓ Explain the uses of simple and multiple regression analysis for cost estimation purposes
✓ Present advantages and disadvantages of account analysis compared to multiple regression for cost estimation
✓ Present and compare the engineering method of cost analysis to regression and account analysis
✓ Understand how regression works
✓ Estimate and use learning curve cost predictions

Key Terms

Understand key terms on page 451 of Hilton, Maher, & Selto.

Lesson Introduction

Throughout the earlier chapters of this course the focus has been on the types of resources used and how to track them. Beginning with Chapter 11, coverage will now start to focus on the efficiency of the use of the resources with planning and decision making in mind. A revisit to the concepts of direct, indirect, variable, and fixed costs and cost hierarchy from Chapter 2 would be good at this time if your memory and understanding are a bit fuzzy on these particular concepts.

Cost understanding and estimation is vital if an organization is to operate in a profitable manner. Organizations often succeed in spite of themselves. But they miss out on more profits that might be achievable with detailed knowledge of costs and how they behave. The normal activity process is for
organizations to operate, get bills, and pay them. It is usually not difficult to determine the amount of activity that causes the costs. What is more challenging is to break down the costs by cost behavior.

This chapter gives several methods that can be used to break down costs to behavior components. Some are simple and others a bit more complicated but more accurate. Cost benefit should be a strong factor of consideration when deciding on which method(s) to use. The reason for cost estimation is primarily threefold:
1. to manage costs
2. to make decisions
3. to plan and set standards

To begin the cost estimation process, focus on behavior, variable versus fixed. General estimations should be made from judgment and then tested. The testing process comes by applying more formal cost estimation methods. These methods are statistical, account analysis, and engineering. They range from simple regression models with one independent variable (cost drivers) and high-low method to multiple regression analysis considering some or all independent variables. Multiple regression and account analysis can be accomplished easily with the use of computer technology. The engineering method is a study of time and motion and involves measuring every activity and cost from start to finish in providing the product or service.

Each method can give similar or very different results. To make sure that the organization has accurate results, a couple of methods should be used in conjunction before a final decision is made on cost distribution between variable and fixed behaviors.

You should try to replicate the results shown in the text through the use of Microsoft Excel 2007. For exam purposes, you will only be responsible for the methods that do not require computer technology to determine a result.

Reading Assignment

Hilton, Maher, & Selto, Chapter 11, pages 416–451 (including appendices)

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 11 “Chapter Highlights” on pages 203–210 in the SG.
2. Complete “Review and Self Test Questions and Exercises” on pages 211–220. You may check your answers on pages 221–223.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question pages.

   1. Fixed costs:
      A. per unit remain the same regardless of total output
      B. remain the same within the relevant range of output
      C. increase in steps as the amount of the cost driver volume increases
      D. have both fixed and variable components in them
      E. none of the above.

   2. Step costs:
      A. per unit remain the same regardless of total output
      B. remain the same within the relevant range of output
      C. increase in steps as the amount of the cost driver volume increases
      D. have both fixed and variable components in them
      E. none of the above.

   3. It takes a worker ten minutes to assemble a toy. With a learning curve of 70% as production doubles, the average time needed to make four units would be:
      A. 4.90 minutes
      B. 3.43 minutes
      C. 3.33 minutes
      D. 3.23 minutes
      E. none of the above.
4. The cost to rebuild a race car engine is $1,500, and a buyer offers to buy four such engines for $6,000. Assuming a cumulative learning curve of 90% as production doubles, the profit will be:
   A. – 0 –
   B. $600
   C. $1,140
   D. $1,215
   E. none of the above.

5. Independent variables are:
   A. the cost drivers that appear to cause certain costs
   B. the cost drivers that correlate with certain costs
   C. caused or correlated with certain activities
   D. A and B
   E. none of the above.

6. In a given situation, total costs amount to $6,000 when labor hours total 400 and $5,000 when labor hours total 300. Using the high-low method, what would be the total cost when labor hours amount to 450?
   A. $4,500
   B. $5,500
   C. $6,500
   D. $7,500
   E. none of the above.

7. R-square is:
   A. the proportion of the variation of the dependent variable explained by dependent variables
   B. the proportion of the variation of the independent variable explained by the independent variables
   C. the proportion of the variation of the dependent variable explained by the independent variables
   D. the proportion of the variation of the independent variable explained by the dependent variable
   E. none of the above.
Lesson 9: Cost Estimation

_____ 8. Multiple regression is:
A. a regression equation with more than one independent variable
B. a regression equation with more than one dependent variable
C. a regression equation with more than one independent and dependent variables
D. a regression that considers unknown factors
E. none of the above.

_____ 9. Account analysis compared to the regression method:
A. is based on past costs
B. needs a software that is often used to find the relation between each of the independent variables and costs
C. requires more data for analysis
D. both A and B
E. both A and C.

_____ 10. Regression as compared to account analysis:
A. is more accurate
B. is more expensive
C. has the burden of providing more information
D. both B and C
E. none of the above.

_____ 11. The engineering method, in contrast to the account analysis method:
A. relies on data from the past
B. relies on present and future data
C. measures the work involved in the activities that go into a product
D. both B and C
E. both A and C.

_____ 12. A restaurant’s total cost for 5,000 meals served amounted to $100,000. The manager is convinced that he can sell the meals at an average of $20 per meal and make a profit if his volume increases because:
A. fixed costs per unit remain the same with a larger volume
B. total fixed costs would be lower with a larger volume
C. variable costs per unit is lower with a larger volume
D. total mixed costs remain the same with a larger volume
E. none of the above.
Lesson 9: Cost Estimation

13. In choosing variables for cost estimation, the following must be considered:
   A. economic plausibility
   B. goodness of fit
   C. significance of the independent variables
   D. all of the above
   E. A and B only.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto:
   - Exercise 11.21, page 453;
   - Exercise 11.22, page 453;
   - Exercise 11.26, page 454;
   - Exercise 11.27, page 454;
   - Exercise 11.31, page 455;
   - Exercise 11.32, page 455;
   - Exercise 11.33, pages 455–456;
   - Exercise 11.34, page 456
Lesson 10: Financial and Cost-Volume-Profit Models

Lesson Objectives
After you have completed this lesson, you should be able to do the following:

✓ Design financial models to match strategic and operational decisions such as profit planning or optimal use of a scarce resource
✓ Build a basic cost-volume-profit (CVP) financial model
✓ Build a financial model that reflects the effects of taxes, multiple products, and multiple cost drivers
✓ Apply scenario and sensitivity analyses to model the risk of decisions
✓ Manage scarce resources
✓ Apply the theory of constraints to manage scarce resources

Key Terms
Understand key terms on page 497 of Hilton, Maher, & Selto.

Lesson Introduction
Financial modeling is a very important tool for a cost accountant to be armed with. The model should always strive to be a good representation of the real situation. The information used should be relevant and reliable so that the result will be fairly accurate for making decisions. There should also be flexibility with the modeling system to accommodate various information inputs.

In this chapter you will explore the most basic financial model, cost-volume-profit (CVP). This model can be used for the analysis of a single product or multiple products. It can help us determine the minimum number of unit sales required to cover all of our costs with no profit as well as help us determine unit sales needed to achieve a target income. All organizations can use financial modeling for operating success. Even sororities and fraternities can use financial modeling to help with fundraising projects.
As you go through this chapter, you will need to focus on several aspects of CVP analysis:

- Computing break-even point in sales dollars and units
- Computing target income in sales dollars and units (include the impact of income taxes)
- Computing break-even point and target income for multiple products (commonly called sales mix)

Financial modeling can also be used in activity-based costing environments. Modeling is probably more easily achieved with the use of computer programming. You should read these sections of the chapter (pages 475–489) very carefully and attempt to reconstruct the information if you have access to Excel 2007.

The information gathered from the initial financial models can be used in sensitivity and scenario analysis. The process is not too complicated. Sensitivity involves changing the initial inputs to the calculations a bit randomly and seeing what happens—a “what if” analysis. Scenario analysis goes a step further and makes sure that the combinations of inputs represent realistic projections of what could happen. These projections are sometimes called best-case, worst-case, and most likely case scenarios.

Businesses are often faced with a situation called scarce resources. They need to make the most of cost dollars. In order to maximize income and keep cost as low as possible, they use modeling designed for scarce resources. This procedure is sometimes labeled the “theory of constraints.” The intended result is to direct cost where it will be used most efficiently while generating the highest income.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 12, pages 466–492

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 12 “Chapter Highlights” on pages 225–232 in the SG.
2. Complete “Review and Self Test Questions and Exercises” on pages 233–240. You may check your answers on pages 241–244.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. AAA Company produced a product which had a selling price of $20 and a variable cost which amounted to 60% of sales. Given a fixed cost of $60,000, the break-even sales will be:
   A. 5,000 units
   B. 5,500 units
   C. 6,000 units
   D. 7,000 units
   E. 7,500 units.

_____ 2. AAA Company produced a product which had a selling price of $20 and a variable cost which amounted to 40% of sales. The company wants a profit before tax of $15,000. The tax rate is 20%, and fixed costs amount to $60,000. AAA must sell:
   A. 6,250 units
   B. 7,396 units
   C. 9,375 units
   D. 9,844 units
   E. none of the above.

_____ 3. AAA Company produced a product which had a selling price of $20 and a variable cost which amounted to 60% of sales. The company wants a profit after tax of $15,000. The tax rate is 20%, and fixed costs amount to $60,000. AAA must sell:
   A. 6,250 units
   B. 7,396 units
   C. 9,375 units
   D. 9,844 units
   E. none of the above.
Lesson 10: Financial and Cost-Volume-Profit Models

4. AAA currently has a profit of $15,000 at a sales volume of 6,250 units and a variable cost of $8 and a selling price of $20. If variable costs increase to $9, by how much can the fixed costs change to still maintain the same profit?
   A. $6,250 decrease
   B. $6,000 decrease
   C. $6,000 increase
   D. $6,250 increase
   E. none of the above

5. AAA currently has a profit of $15,000 at a sales volume of 9,375 units and a fixed cost which amounts to $65,625 and a selling price of $20 per unit. Variable cost per unit should be:
   A. $12.60
   B. $12.00
   C. $11.40
   D. $11.00
   E. none of the above.

6. ABC Company sells three products with exactly the same price of $20 a unit. However, A’s contribution margin amounts to 40%, B’s amounts to 50%, and C’s amounts to 60% of sales. Sales mix for A, B, and C is at 500, 1500, and 3000 units respectively. Fixed costs amount to $16,500. Break-even sales for B should be:
   A. 450 units
   B. 600 units
   C. 750 units
   D. 1,500 units
   E. none of the above.

7. ABC Company sells three products with exactly the same price of $20 a unit. However, A’s variable cost is at 40%, B’s at 50%, and C’s at 60%. Fixed costs amount to $18,000. An additional $9,000 needs to be spent on advertising to boost sales. Sales mix is at 500, 1500, and 3000 units for A, B, and C respectively. Sales in dollars for C at break-even amounts to:
   A. $18,000
   B. $24,000
   C. $36,000
   D. $45,000
   E. none of the above.
Lesson 10: Financial and Cost-Volume-Profit Models

8. ABC’s sales mix has drastically changed because of market conditions to 3,000 units for A; 1,500 units for B; and 500 units for C. Fixed costs have increased to $22,000 per period. The selling price is at $20 a unit for all products with a variable cost of 40%, 50%, and 60% for A, B, and C respectively. Break-even units for B will be:
   A. 300 units
   B. 600 units
   C. 900 units
   D. 1,200 units
   E. none of the above.

9. Omid Company produces and sells two products, M and N, for $29 and $19 a unit respectively. Variable costs amount to $14 for M and $12 for N per unit. It takes 1½ hours to make one unit of M and ½ hour to make one unit of N. Total manpower available is 1,300 hours and maximum demand is 1,800 units of M and 1,700 units of N. The optimum production of M to maximize profit should be:
   A. 300 units
   B. 900 units
   C. 1,700 units
   D. 1,800 units
   E. none of the above.

10. Ryan Enterprises had sales amounting to $300,000, 40% of which was for variable costs with a profit amounting to $20,000. The company has an operating leverage of:
    A. 9 times
    B. 8 times
    C. 7 times
    D. 6 times
    E. 5 times.

11. Ryan Enterprises had sales amounting to $300,000, 40% of which was for variable costs with a profit amounting to $20,000. If sales increase by 20%, profit will amount to:
    A. $36,000
    B. $46,000
    C. $56,000
    D. $66,000
    E. none of the above.
12. Blue Printing expects its fixed costs to amount to $180,000. The company has an average selling price of $40 a unit with a variable cost of 60% and desired profit of 10% of sales. The company’s sales should amount to _____ to meet its objectives.
A. $500,000
B. $600,000
C. $700,000
D. $800,000
E. $900,000

13. The theory of constraint:
A. is the constraint or constraining factor
B. is a process or resource in a system that limits the capacity of the system
C. seeks to improve productive processes by focusing on the constraining factors
D. both A and B
E. both B and C.

14. Constraint:
A. is a process or resource in a system that limits the capacity of the system
B. seeks to improve productive processes by focusing on the constraining factors
C. both A and B
D. both B and C
E. none of the above.

15. Sensitivity analysis answers “what if” questions such as possible impact of changes in:
A. sales prices
B. variable costs
C. fixed costs
D. sales mix
E. all of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 12.30, page 499; Exercise 12.31, page 499; Exercise 12.33, page 500;
Exercise 12.34, page 500;
Exercise 12.35, pages 500–501;
Exercise 12.39, pages 501–502;
Exercise 12.40, page 502
Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Structure business decision-making problems into objectives, alternative actions, and expected outcomes
✓ Identify both quantitative and qualitative relevant costs and benefits of decision alternatives
✓ Use decision trees to describe business decisions
✓ Use a benefit-cost approach for common decisions such as obtaining new technology or capability; outsourcing (make versus buy); or modifying, adding, or dropping a product, service, or business unit; and pricing, including special orders and lifecycle costs

Key Terms

Understand key terms on page 541 of Hilton, Maher, & Selto.

Lesson Introduction

Decisions are a part of every manager’s work life. Making wise and good choices should always be the overall objective. Often cost accountants are asked to participate in the decision-making process by providing information and making presentations that help management. The decisions should always be made based on relevant and accurate data.

The starting point of the decision-making process has three stages:

1. Setting goals and objectives
2. Gathering quality information
3. Evaluating alternatives
The final phase of this entire process should be the feedback stage. It is only possible to know if a good decision was made by getting the results of the choice selected and assessing the choice. We should learn to make new decisions based on the strengths and weaknesses of past decisions.

Managers in business often face several types of decisions. The more common types are make or buy; add or drop a product, service, or business unit; replace equipment; special orders; and pricing decisions. As you go through the chapter, take particular note of the idea of relevance of information. Information can just be information, but it becomes relevant if it can impact the choice selection made in decision making.

Make sure that you understand the methodology used to make a selection in each type of decision. While you are given the accounting perspective, understand that these methodologies can be used in personal situations too. Everyone likes to feel that he or she can make good choices at work, at play, and in everyday life.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 13, pages 514–541

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 13 “Chapter Highlights” on pages 245–251 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

1. A relevant cost is a cost that:
   A. occurs in the future and is the same among competing alternatives
   B. occurred in the past and is the same among competing alternatives
   C. occurs in the future and is different among competing alternatives
   D. occurred in the past and is different among competing alternatives
   E. none of the above.

2. Well Company can make product X that costs $27.50 a unit with an output of 1,000 units or buy it from outside (outsource) at $25 a unit and get a rent of $2,000 a period for the freed space. The indirect overhead allocated to product X amounts to $3,600 a period. Which of the following outcomes would Well Company experience if it outsourced product X?
   A. savings of $900
   B. loss of $900
   C. savings of $4,100
   D. loss of $4,100
   E. none of the above
3. A particular general store has two departments—cosmetics and other goods. Cosmetics had a profit of $87,500. Other goods had a loss of $24,800. Forty percent of the rent of $120,000 is charged to other goods. If the store closes the other goods department, it can sublet the space and receive an income of $18,000 for it. If the store closes the other goods department, which will occur?
   A. Losses will decrease by 5,200.
   B. Losses will increase by 5,200.
   C. Losses will remain the same.
   D. None of the above will occur.

4. Saba Printing is considering accepting an order for $24,900 even though its cost amounts to $28,500 inclusive of $12,500 worth of overhead; 60% of this overhead is avoidable if the order is not accepted. The order should be:
   A. accepted because it increases profit by $1,400
   B. rejected because it decreases profit by $1,400
   C. accepted because it increases profit by $3,600
   D. rejected because it decreases profit by $3,600
   E. none of the above.

5. Junior Toys is considering selling 500 units of its AA Toy, which has a total cost of $25 a unit (60% of which is variable cost), for only $19 a unit to a customer who does business in Mexico. The current selling price of the AA Toy is $29 a unit and the company has no excess capacity. Junior should:
   A. sell the toys because it will increase its profit by $2,000
   B. not sell the toys because it will decrease its profit by $2,000
   C. sell the toys because it will increase its profit by $5,000
   D. not sell the toys because it will decrease its profit by $5,000
   E. none of the above.

6. Shahnaz Designs expects a profit of 20% on total cost of Mrs. Y’s job. The job costs $23,500, and supplies and shipping charges come to an additional $1,500. The job’s selling price should be:
   A. $28,200
   B. $29,375
   C. $30,000
   D. $31,250
   E. none of the above.
Lesson 11: Cost Management and Decision Making

_____ 7. A fair price for a certain company's briefcase is $60. From this price the retailer receives a margin of 30%. The product costs the company $42.50 in addition to $250 shipping charge for each lot of 100 units shipped. By how much should the cost be reduced in order for the manufacturer to have a profit of $2 per unit?
A. $2
B. $3
C. $4
D. $5
E. none of the above

_____ 8. A certain lamp costs the company $25 to produce, and it can be sold for $28 a unit for an annual production of 2,000 units. The company has an investment of $40,000 and requires a return of 20% on investment. The target profit per unit amounts to:
A. $5
B. $4
C. $3
D. $2
E. none of the above.

_____ 9. A certain lamp costs the company $25 to produce, and it can be sold for $28 a unit for an annual production of 2,000 units. The company has an investment of $40,000 and requires a return of 20% on investment. The target cost per unit amounts to:
A. $24
B. $25
C. $26
D. $27
E. none of the above.

_____ 10. Ryan Company is considering accepting a special order for 600 units of product A which costs $25 a unit (inclusive of $3,600 in common costs) for $22 a unit. Accepting this order increases fixed costs by $1,200. The current selling price is $29 a unit. Ryan’s excess capacity is around 900 units. If this order is accepted, profit will:
A. increase by $600
B. decrease by $600
C. increase by $1,800
D. decrease by $1,800
E. none of the above.
Lesson 11: Cost Management and Decision Making

_____ 11. Ryan Company is considering accepting a special order for 600 units of product A which costs $25 a unit (inclusive of $3,600 in fixed costs) for $22 a unit. Accepting this order increases fixed costs by $1,200. The current selling price is $29 a unit. Ryan’s excess capacity is around 300 units. If this order is accepted, profit will:
   A. increase by $1,400
   B. decrease by $1,400
   C. increase by $1,500
   D. decrease by $1,500
   E. none of the above.

_____ 12. Arman has a drug store with two departments, drugs and supplies. The drug division had total sales of $400,000 and a cost of sales of 40%. Supplies division had total sales of $200,000 and a cost of sales of 70%. Each division has a direct overhead of $45,000. Common store costs inclusive of rent amount to $150,000 and are allocated to the two departments based on their sales. Supplies division’s loss amounts to:
   A. $15,000
   B. $20,000
   C. $30,000
   D. $35,000
   E. none of the above.

_____ 13. Arman has a drug store with two departments, drugs and supplies. The drug division had total sales of $400,000 and a cost of sales of 40%. Supplies division had total sales of $200,000 and a cost of sales of 70%. Each division has a direct overhead of $45,000. Common store costs inclusive of rent amount to $150,000 and are allocated to the two departments based on their sales. If supplies department is closed, overall profit will:
   A. decrease by $15,000
   B. increase by $15,000
   C. decrease by $35,000
   D. increase by $35,000
   E. none of the above.
Arman has a drug store with two departments, drugs and supplies. The drug division had total sales of $400,000 and a cost of sales of 40%. Supplies division had total sales of $200,000 and a cost of sales of 70%. Each division has a direct overhead of $45,000. Common store costs inclusive of rent amount to $150,000 and are allocated to the two departments based on their sales. Management is considering closing the supplies department and renting the space for $50,000 a period. With this decision, overall profit will:

A. decrease by $45,000
B. increase by $45,000
C. decrease by $35,000
D. increase by $35,000.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 13.34, page 545;
Exercise 13.35, page 545;
Exercise 13.41, page 546;
Exercise 13.46, page 547;
Exercise 13.50, pages 548–549
Lesson 12: Strategic Issues in Making Investment Decisions

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Describe the strategic importance of capital investments
✓ Identify external and internal information for strategic investments
✓ Learn to use forecasts of quantitative and qualitative effects of strategic investments in net present value analysis
✓ Model the impact of competitors’ actions
✓ Identify and apply ethical issues in strategic investment decisions

Key Terms

Understand key terms on page 591 of text.

Lesson Introduction

In the previous chapter, we discussed decision making as it related to everyday operations. In this chapter, the decision-making concept continues but with a focus on long-term assets. These investments are usually much longer than one year in nature and require a number of projections (estimates) for analysis purposes. As the book states these “are major decisions that have long-term consequences beyond current consumption” (page 562).

The other big factor is that long-term investments usually take large dollar-amount commitments for organizations.
Great care is needed regarding information gathered and how it is analyzed. Making good decisions is always the objective. There is an old saying that goes, “garbage in, garbage out.” Managers should always want to do whatever they can so that they don’t end up in this position.

Long-term investments require looking into the future, projecting what will happen, and then evaluating the projections to see if they give the desired results. The projections include future amounts. However, the decision is being made in the present. So the future amounts have to be discounted back to today’s value. A dollar in the future is not worth a dollar today.

Adjusting projections to present values will be covered in detail. This process is called discounted cash flow analysis. Pay particular attention to depreciation. This allowable expense for tax purposes does not represent a cash outflow of an organization. It does impact the amount of actual income taxes paid, so it must be considered but not taken out of income when cash flows are determined (see pages 570 and 571 of text).

Once you completely understand how to calculate cash flow, move on to the tools we use to evaluate investments. You will be responsible for the net present value (NPV), internal rate of return (IRR), and payback (PB) methods.

Finally, businesses frequently operate in the global markets. Ethical issues often arise with long-term decisions. What is ethical for one country or business may not be ethical for the other. One corporate culture does not define another. As you begin your career, make sure that you familiarize yourself with the culture of your organization and examine how it meshes with your own personal ethics.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 14, pages 560–591

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 14 “Chapter Highlights” on pages 265–269 in the SG.

Lesson Assignment

**Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.**

1. Your grandfather is considering two options to assist you financially. Option 1 is paying you $5,000 a year for the next four years to help out with your college tuition. Option 2 is paying you a lump sum of $21,000 in four years upon graduation for the purchase of your first car. Assuming that you can get a return of 10 percent at the bank, which option will you prefer and why?
   A. option 1 because its present value is over $1,500 higher
   B. option 2 because its present value is over $1,500 higher
   C. option 1 because its present value is over $870 higher
   D. option 2 because its present value is over $870 higher
   E. none of the above

2. You are considering buying a certain taxi for $15,000. It will provide you with a cash flow of $4,800 per year, and you would have to give the car away after four years. Your desired return is 10% per year. Using NPV to help determine your answer, what decision should you make?
   A. buy because you would have an NPV = $850
   B. don’t buy because you would have an NPV = −$850
   C. buy because you would have an NPV = $216
   D. don’t buy because you would have an NPV = −$216
   E. none of the above

3. You are considering buying a certain taxi for $15,000. It will provide you with a cash flow of $4,000 per year, and you would be able to sell the car for $3,200 after four years. Your desired return is 10% per year. Using NPV to help determine your answer, what decision should you make?
   A. buy because NPV = $134
   B. don’t buy because NPV = −$134
   C. buy because NPV = $153
   D. don’t buy because NPV = −$153
   E. none of the above
You are considering buying a certain computer for $15,000. It will provide you with a cash flow of $4,500 per year, and you would be able to sell it for $2,000 at the end of its useful life of four years. You are able to depreciate $3750 per year for tax purposes. Your tax rate is at 30% and your expected return is at 10% per year. Using NPV to help determine your answer, what decision should you make?
A. buy because NPV = $423  
B. don’t buy because NPV = –$423  
C. buy because NPV = $631  
D. don’t buy because NPV = –$631  
E. none of the above

You owe $1,457 to your friend. He tells you that in consideration of full payment of this debt, he expects you to pay him $500 per year for the next four years. Compute your friend’s expected return.
A. 10%  
B. 12%  
C. 14%  
D. 16%  
E. not able to be determined

Your older brother has started a business and needs cash. He tells you that if you pay him $5,160 today, he will pay you back $10,000 in four years. He is in effect giving you a return of:
A. 20%  
B. 18%  
C. 16%  
D. 14%  
E. cannot be determined.

You have borrowed $6,480 from the bank and are told that the yearly payment for four years amounts to $2,000. The bank is charging you an interest of:
A. 12%  
B. 11%  
C. 10%  
D. 9%  
E. none of the above.
Lesson 12: Strategic Issues in Making Investment Decisions

_____ 8. You have agreed to an annual payment of $3,000 for four years on a loan which has an interest rate of 8%. The loan amount should be:
   A. $12,000
   B. $10,161
   C. $9,936
   D. $9,720
   E. none of the above.

_____ 9. You have agreed to a lump sum payment of $5,000 in four years on a loan which has an interest of 7% per year attached to it. The loan amount should be:
   A. $4,275
   B. $4,115
   C. $3,960
   D. $3,815
   E. none of the above.

_____ 10. When computing a discount rate, we must consider:
   A. interest factors
   B. riskiness of the project
   C. stockholders’ expected return
   D. all of the above
   E. both A and B.

_____ 11. In discounted cash flow analysis, we consider all of the following except:
   A. disposal value of the old asset
   B. book value of the old asset
   C. installation charges of the new system
   D. purchase price of the new system
   E. tax effect of depreciation of the new system.

_____ 12. In discounted cash flow analysis, we consider all of the following except:
   A. future revenues of the project
   B. future appreciation of the asset
   C. working capital needs of the project
   D. salvage value of the project
   E. tax effect of depreciation of the project.
Lesson 12: Strategic Issues in Making Investment Decisions

13. NBC Company considers a project that will generate sales of $60,000. Fixed costs will be $16,000 per year. Variable costs are 40% of sales. Depreciation of the project will be $5,000 per year in addition to the fixed costs. Taxes are at 30%. The expected annual cash flow from this project will be:
   A. $15,400
   B. $15,500
   C. $16,400
   D. $16,500
   E. none of the above.

14. The discount rate commonly used in present value calculations is:
   A. the treasury bill rate
   B. the prime rate
   C. the federal reserve rate
   D. the shareholders’ expected return on equity
   E. none of the above.

15. You have borrowed $2,200 plus $51 expenses for borrowing payable in one year in 12 monthly installments with an annual interest rate of 12%. The monthly payment amounts to:
   A. $187.58
   B. $200.00
   C. $206.36
   D. $210.09
   E. none of the above.

16. Your father has given you a certificate of deposit amounting to $20,000 which earns an interest of 12% per year paid semiannually for two years. You deposit the interest and earn interest on it as well. Your investment after two years will grow to:
   A. $25,000
   B. $25,250
   C. $26,000
   D. $26,216
   E. none of the above.

17. The internal rate of return is:
   A. the hurdle rate
   B. the rate of return for which the present value of cash inflows equals the present value of cash outflows
   C. the weighted average cost of debt plus cost of equity
   D. the dividend as a percentage of stock price plus the growth expectation of the investor
   E. none of the above.
Lesson 12: Strategic Issues in Making Investment Decisions

18. Ethical dimensions of strategic investments may include:
   A. bribing foreign officials for getting the contract
   B. ignoring environmental factors
   C. bias from personal commitment to a project
   D. all of the above
   E. A and B only.

19. The ethical foundation of a business dealing with strategic decisions can be enhanced through:
   A. proper hiring practices
   B. investment reporting and review techniques
   C. formulating a proper code of ethics
   D. internal audits
   E. all of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 14.46, page 596;
Exercise 14.48, page 596;
Exercise 14.49, page 596;
Exercise 14.50, page 596;
Exercise 14.51, page 597;
Exercise 14.52, page 597;
Exercise 14.53, page 597;
Exercise 14.55, page 598;
Exercise 14.56, page 598
Examination II

Preparation

It is now time to prepare for and take Examination II. If you are not going to take your exam at LSU-Baton Rouge, notify us of your proctor by sending the completed Exam Proctor Information Form located in the appendix of this course guide to the Independent & Distance Learning office.

Please read the College Examination Information instructions located in the appendix of this course guide for further details.

About Examination II

Exam II will cover Lessons 7–12 and consists of 40 multiple choice questions and 1 long problem. The exam will be worth 100 points. The multiple choice questions will be worth 2 points each and the long problem worth 20 points. You will have three hours to complete the exam. You may not use graphing calculators for the exam; a financial or business calculator is acceptable.

NOTE: The listing below is intended to help guide your study. However, it is not intended to suggest that this is the entirety of the testable materials. Any material from the textbook (chapter narratives and end-of-chapter materials), the study guide, and the course guide (self check and lesson assignments) is valid for exam coverage.

Make sure that you understand the concept, computation, and application of theory for the following:

Lesson 7 – Joint Process Costing

- New terminology
- Allocation of joint cost using:
  - Net realizable value method
  - Relative sales value at split-off method
  - Physical measure method
- Accounting for by-products
Lesson 8 – Managing and Allocating Support Service Costs
• Purpose for allocating service department costs
• How to rank service departments
• Allocation of service department costs using:
  o Direct method
  o Step method

Lesson 9 – Cost Estimation
• The definition and graphing of fixed and variable costs on a total and per-unit basis
• Definition and graphing of step fixed costs
• High-low method of separating and identifying total fixed costs and variable per-unit costs
• Regression analysis for identifying fixed and variable costs

Lesson 10 – Financial and Cost Volume Profit Models
• Financial modeling for decision making
• Break-even concept, computation, and application
• Target income concept, computation, and application
• Multiple product break-even concept, computation, and application
• Income tax effect on target income model
• Theory of constraints concept and computations

Lesson 11 – Cost Management and Decision Making
• Stages of decision making
• Concept of cost benefit analysis
• Types of decisions (concept, computation, and application):
  o Special order
  o Make or buy
  o Add or drop a segment
  o Replace equipment
• Pricing impacts

Lesson 12 – Strategic Issues in Making Investment Decisions
• Understand the strategic importance of capital investments
• Understand the impact of interest and the value of $1 on decisions (future value and present value concepts)
• Understand the concepts and computations of models
• Net present value (NPV)
• Internal rate of return (IRR)
• Payback (PB)

If you prepare diligently, you should do well. Good luck!
Lesson 13: Budgeting and Financial Planning

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✔ Describe the key role that budgeting plays in the strategic planning process
✔ Present and explain five purposes of budgeting systems
✔ Demonstrate how to prepare a master budget, including its components
✔ Evaluate a typical organization’s process of budget administration
✔ Discuss the behavioral implications of budgetary slack, and explain the workings of a participatory budget
✔ Describe contemporary trends in the budgeting process as an element of a cost management system
✔ Use the economic-order-quantity model, and discuss the implications of JIT (just-in-time) on inventory management

Key Terms

Understand key terms on page 640 of Hilton, Maher, & Selto.

Lesson Introduction

As was mentioned in earlier chapters, the responsibilities of cost accountants are to plan, direct, and control. At the beginning of the course, you were introduced to the concept of costs and how to track them. Now you will be shown how to use those costs in achieving the responsibilities of cost accountants. The planning responsibility is achieved through the development and implementation of budgets. Future chapters will continue the directing and controlling processes.

A budget takes management’s goals and objectives and places them in detailed plans of action. This chapter will introduce you to systematic ways that managers develop and communicate organizational goals. The budgeting
process has to begin with a plan. Upper management focuses and establishes goals, and then the budget committee quantifies the goals with the use of formal budget documents. The purpose of this systematic approach is to use the documents developed as communication tools for other employees, enabling them to learn the expectations for operations.

The major budget focus of this chapter is the master budget. The master budget is a set of interrelated operating and financing budgets. Operational budgets develop the information that is traditionally found on the income statement; financial budgets provide information for the balance sheet.

The starting point for the master budget process is a sales forecast. This number should be developed with input from employees in sales, marketing, and production. The sales forecast is the driving force for the entire budget process. If this number is not a relatively accurate one, then the information generated from the process may not be worth the paper that it’s written on.

As you go through this chapter, pay particular attention to Exhibit 15-1 on text page 613. It is a great recap of the budgets that will be covered. Look at how one budget connects to the other and then ultimately feeds information to the cash budget. This chapter contains a number of important concepts, so you may want to read this chapter even more carefully than previous ones. Doing so should help you grasp the ways one budget connects to another.

To complete your study of the chapter, don’t forget to examine the concept of inventory management. Because inventory is traditionally one of the largest dollar items on the balance sheet, organizations want to optimize the investment.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 15, pages 608–639

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 15 “Chapter Highlights” on pages 283–293 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question pages.

1. A master budget is composed of the:
   A. sales budget, production budget, and operational budget
   B. operating and financial budgets
   C. budgeted income statement, budgeted balance sheet, and budgeted cash flows
   D. manufacturing budget, cost of sales budget, and cash budget
   E. none of the above.

2. The first step in making budgets is the preparation of:
   A. the budgeted income statement
   B. the budgeted statement of cash flows
   C. the sales budget
   D. the budgeted balance sheet
   E. none of the above.

3. The Delphi technique is a sales forecasting method that:
   A. allows members of the forecasting group to prepare individual forecasts and then compare and discuss those forecasts until they converge on a single best estimate
   B. enters sales data into a regression model to obtain a statistical estimate of factors affecting sales
   C. is prepared through summarizing of past performance and adding a percentage to cover potential future growth
   D. accounts for production and research facility requirements in its analysis
   E. none of the above.
M & N Company has two products, M and N, with an inventory beginning of 195 yards of M and 345 yards of N. Sales for the coming period is anticipated to amount to 2,900 yards of M and 3,760 yards of N. The company policy is to keep at least 15% of the period’s sales in inventory. Budgeted production of N amounts to:
A. 4,314 yards
B. 3,979 yards
C. 3,335 yards
D. 3,140 yards
E. none of the above.

Use the following data to answer questions 5 through 9.

M & N has decided to produce 3,200 yards of product M and 3,900 yards of product N. M uses 70% nylon and 30% rayon. N is 100% wool. Each yard of M weighs 1.5 pounds, and each yard of N weighs 2 pounds. The price of nylon is $2.50 a pound, rayon $1.75 a pound, and wool $3.90 a pound. Inventory beginning amounts to 225 pounds of nylon, 135 pounds of rayon, and 185 pounds of wool. Inventory ending is required to be 20% of the period’s usage.

Rayon usage amounts to:
A. 7,800 pounds
B. 4,800 pounds
C. 3,360 pounds
D. 1,440 pounds
E. none of the above.

Wool usage amounts to:
A. 7,800 pounds
B. 4,800 pounds
C. 3,360 pounds
D. 1,440 pounds
E. none of the above.

Purchases of nylon amount to:
A. 1,593 pounds
B. 1,728 pounds
C. 3,807 pounds
D. 4,032 pounds
E. none of the above.
Lesson 13: Budgeting and Financial Planning

8. Purchases of wool amount to:
   A. $2,787.75
   B. $9,517.50
   C. $15,975.25
   D. $35,782.50
   E. none of the above.

9. Material cost per yard of M amounts to (rounded):
   A. $3.41
   B. $4.41
   C. $6.80
   D. $7.80
   E. none of the above.

10. Shahnaz Fabrics is anticipating to sell 2,900 yards of product M and 3,760 yards of product N at $9.50 and $24.50 per yard respectively in the month of September. Terms of sales are 30% cash, 50% in 30 days, and 20% in 60 days. However, 20% of the latter amount is expected to be uncollectible. The uncollectible balance is written off to bad debts when the last installment is due. Cash receipts for September amount to:
    A. $17,950
    B. $35,901
    C. $49,835
    D. $59,835
    E. none of the above.

11. Shahnaz Fabrics is anticipating to sell 2,900 yards of product M and 3,760 yards of product N at $9.50 and $24.50 per yard respectively in the month of September. Terms of sales are 30% cash, 50% in 30 days, and 20% in 60 days. However, 20% of the latter amount is expected to be uncollectible. The uncollectible balance is written off to bad debts when the last installment is due. Accounts receivable as of October 31 amounts to:
    A. $83,769
    B. $23,934
    C. $5,983
    D. –0–
    E. none of the above.
Lesson 13: Budgeting and Financial Planning

12. A budgeting system:
   A. comprises the procedures used to develop a budget
   B. is a detailed plan expressed in quantitative terms
   C. is a general plan expressed in monetary terms
   D. specifies how an organization will acquire and use resources during a particular period of time
   E. none of the above.

13. Revolving budgets are:
   A. prepared on an annual basis
   B. prepared semi-annually
   C. the same as continuous budgets
   D. updated periodically by adding a new incremental time period
   E. both C and D.

14. Budgetary slack is:
   A. the intentional underestimating of the budget
   B. the unintentional overestimating of the budget
   C. the difference between the revenue or cost projection and a realistic estimate of the revenue or cost
   D. both A and C
   E. both B and C.

15. Zero-base budgeting sets:
   A. the budget for each item below the prior year
   B. the budget slightly above the prior year’s budget
   C. the budget for virtually every activity in the organization to zero initially
   D. both A and C
   E. none of the above.

16. Economic order quantity is the order level where:
   A. ordering cost equals carrying costs
   B. ordering cost is greater than carrying costs
   C. ordering cost is less than carrying costs
   D. any of the above.

17. Carrying cost is calculated by multiplying:
   A. average inventory times carrying cost per unit
   B. inventory times carrying cost per unit
   C. ending inventory times carrying cost per unit
   D. beginning inventory times carrying cost per unit.
18. Ordering cost is calculated by multiplying the:
   A. number of orders times cost per order
   B. average inventory times cost per order
   C. ending inventory times cost per order
   D. beginning inventory times cost per order.

**Part B:** Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 15.24, page 642;
Exercise 15.25, page 642;
Exercise 15.28, page 643;
Exercise 15.29, page 643;
Exercise 15.32, page 644;
Exercise 15.37, page 645;
Exercise 15.40, page 646
Lesson 13: Budgeting and Financial Planning

NOTES
Lesson 14: Standard Costing, Variance Analysis, and Kaizen Costing

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Discuss how companies use standard-costing systems to manage costs, and describe two ways to set standards
✓ Define and distinguish between perfection and practical standards
✓ Show how to compute and interpret the direct-material price and quantity variances, and the direct-labor rate and efficiency variances
✓ Describe several methods for determining the significance of cost variances
✓ Discuss the behavioral effects of standard costing, and discuss the controllability of variances
✓ Explain how companies use standard costs in product costing
✓ Summarize some advantages attributed to standard costing
✓ Describe the changing role of standard-costing systems in today’s manufacturing environment
✓ Explain the concept of kaizen costing and its potential benefits

Key Terms

Understand key terms on page 689 of Hilton, Maher, & Selto.

Lesson Introduction

This chapter will demonstrate how cost accountants help control costs. To facilitate the control function, accountants use a process called variance analysis. The analysis breaks down each component of cost (the quantity and
price of the resource used—DM, DL, MOH) and compares what is expected to occur (budgeted) to what actually occurs. The difference between budgeted and actual cost is known as a variance. The variances are then reviewed to determine whether further investigation is necessary.

The costs developed in the previous chapter are given the label “standard costs.” Standards are estimates of both quantities and price of each cost component: raw materials, labor, and overhead. In this chapter the focus will be on raw materials and labor variances. Overhead variances will be covered in the succeeding chapter.

As you move through this chapter, make sure that you understand completely one method of calculating variances, either equation or matrix. Try both methods and consistently use one. Once you have the calculations mastered, move on to the journal entries.

Pay close attention to the conceptual aspects of variances: significance of and who can control the variances.

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 16, pages 660–685 (omit appendix)

**Self Check**

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 16 “Chapter Highlights” on pages 307–318 in the SG.
Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question pages.

______ 1. In the contemporary manufacturing environment, there is:
A. more emphasis on price and quantity variances of materials and labor
B. more emphasis on quality products and customer satisfaction
C. more emphasis on throughput efficiency
D. all of the above
E. both B and C.

Use the following data to answer questions 2–5.

Nahid Curtains makes two kinds of curtains. Standards are as follows: Curtain A uses 9 yards of fabric, and curtain B uses 5.5 yards. Fabric A is $16 per yard whereas B is $12. Actuals for the month of June are 3,200 yards of A and 2,400 yards of B purchased for $79,200. Of this amount $52,800 was for fabric A. A total of 310 curtain A’s and 340 curtain B’s were made in this time period. The actual usage amounted to 3,050 yards of A and 1,900 yards of B.

______ 2. Material purchase price variance for A amounts to:
A. $1,525 UF
B. $1,600 UF
C. $1,600 F
D. $2,400 F
E. none of the above.

______ 3. Material usage variance for B amounts to:
A. $4,160 UF
B. $360 UF
C. $375 F
D. $800 F
E. none of the above.
Lesson 14: Standard Costing, Variance Analysis, and Kaizen Costing

4. The journal entry for material purchased, excluding variances, should:
   A. debit accounts payable and credit work in process
   B. debit inventory and credit accounts payable
   C. debit work-in-process and credit inventory
   D. debit inventory and credit work in process
   E. none of the above.

Use the following data to respond to questions 5–7.

Saba typesetting uses two grades of labor. Grade one is budgeted at $8 an hour and grade two at $11 an hour. Each job is budgeted 1.5 hours of grade one labor and 0.8 hours of grade two labor. Grade one actual labor for the period amounted to 1,100 hours, and grade two actual labor amounted to 560 hours. Total payroll for wage employees amounted to $15,400. Of this amount, $13,850 is for direct labor with $8,250 belonging to grade one. A total of 685 jobs were processed in the period.

5. Labor efficiency variance for grade one labor is:
   A. $580 F
   B. $132 F
   C. $132 UF
   D. $580 UF
   E. none of the above.

6. Labor rate variance for grade two labor amounts to:
   A. $30 UF
   B. $428 F
   C. $550 F
   D. $560 F
   E. none of the above.
7. The journal entry for payroll (exclusive of variances) should:
   A. debit manufacturing overhead for $1,550 and work-in-process (WIP) for $13,850, and credit payroll summary for $15,400
   B. debit WIP for $15,400, and credit payroll summary for $15,400
   C. debit payroll summary and credit WIP for $15,400
   D. debit payroll expense for $15,400 and credit payroll summary for $15,400
   E. none of the above.

8. Material usage variance for M amounts to:
   A. $4,500 F
   B. $16,800 F
   C. $4,500 UF
   D. $16,800 UF
   E. none of the above.

9. Material price variance for N amounts to:
   A. $5,500 UF
   B. $7,500 UF
   C. $5,500 F
   D. $7,500 F
   E. none of the above.

10. Criticisms of standard costing include which of the following?
    A. Variances are too aggregate and too late to be useful.
    B. Variances are not tied to specific product lines or flexible manufacturing system cells.
    C. Standard costing systems focus too much on direct labor.
    D. All of the above are correct.
    E. Both A and C are correct.
Lesson 14: Standard Costing, Variance Analysis, and Kaizen Costing

11. Which of the following is an advantage often attributed to standard costing?
   A. Standard costing enables managers to employ management by exception.
   B. Standard costing provides a basis for sensible cost comparisons.
   C. Variances provide a means of performance evaluation.
   D. All of the above are correct.
   E. Both A and B are correct.

12. Standard cost may be used in:
   A. job-order costing or process costing
   B. job-order costing but not process costing
   C. process costing but not job order costing
   D. normal costing but not job order costing
   E. actual costing but not process costing.

13. Which of the following factors should be considered when deciding whether to investigate a variance?
   A. magnitude of the variance and the cost of investigation
   B. trend of the variances over time
   C. likelihood that an investigation will eliminate future occurrences of the variance
   D. whether the variance is favorable or unfavorable
   E. A, B, and C only

14. Which department is customarily responsible for an unfavorable labor efficiency variance?
   A. quality control
   B. purchasing
   C. engineering
   D. production
   E. personnel

15. Standard costing is often criticized because:
   A. variances calculated are too aggregated
   B. it places too much emphasis on direct labor costs and efficiency
   C. it is based on stable production processes
   D. it focuses only on cost minimization
   E. all of the above.
Lesson 14: Standard Costing, Variance Analysis, and Kaizen Costing

16. Standard costing can become more useful if:
   A. less emphasis is put on direct labor variances
   B. more emphasis is placed on direct material and overhead variances
   C. cost driver analysis becomes the focus
   D. more attention is paid to eliminating non-value-added costs
   E. all of the above.

17. For standard costing to become more useful, it should be:
   A. revised more frequently when needed
   B. in line with TQM and JIT requirements
   C. used in conjunction with qualitative factors
   D. supplemented with benchmarking tools
   E. all of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 16.23, page 692;
Exercise 16.24, page 692;
Exercise 16.25, page 692;
Exercise 16.28, pages 692–693;
Exercise 16.30, page 693
Lesson 15: Flexible Budgets, Overhead Cost Management & Activity-Based Budgeting

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

- Explain how cost managers use flexible budgets to control overhead costs
- Prepare and interpret a flexible overhead budget
- Show how overhead is applied to work-in-process inventory when a standard costing system is used
- Discuss issues related to choosing activity measures for overhead budgeting and application
- Demonstrate how to compute and interpret variable overhead spending and efficiency variances, as well as fixed overhead budget and volume variances
- Show how to prepare and interpret an overhead cost performance report
- Illustrate journal entry preparation to record manufacturing overhead costs under a standard costing system
- Explain why an activity-based flexible budget may provide more useful cost-management information than a conventional flexible budget

Key Terms

Understand key terms on page 735 of Hilton, Maher, & Selto.

Lesson Introduction

In this chapter, the control function of cost accountants is still the focus. The lesson introduces you to the concept of flexible budgeting. Flexible budgeting is precisely what its name seems to indicate. Instead of taking a budget at one pre-calculated level of activity and comparing it to actual costs for a different level of activity, flexible budgeting prepares a budget for the actual level of activity and then compares it to the actual activity level costs. I am sure that you
Lesson 15: Flexible Budgets

have heard the saying “comparing apples to apples.” That is what managers always want to make sure that they do when making a decision.

You analyzed direct material and direct labor cost usage in the previous chapter. The current chapter analyzes manufacturing overhead cost usage. When analyzing overhead, it is important to remember the cost behavior concepts learned in earlier chapters. Manufacturing overhead is made up of many components, and each of them can behave in either a variable or fixed way.

For the variable portion of overhead, variance analysis works much like direct material and direct labor. Fixed overhead variances are calculated a little differently. The information used is the actual versus budgeted costs and the budgeted costs versus applied overhead. Make sure that you track each number in the exhibits and understand what is being used. This concept is a little abstract for some students, but you can master it.

Before you wrap up your study, review journal entries for recording and removing variances. Finally, the chapter presents an activity-based flexible budget example. Study and review it. Even though the example focuses on a manufacturing industry, similar methodology can be used in service and merchandising industries.

You are approaching the end of this course. You have covered almost 80% of the material. Keep your energy up, and let’s move on to the final chapters and exam.

Reading Assignment

Hilton, Maher, & Selto, Chapter 17, pages 702–723 (omit appendix)

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 17 “Chapter Highlights” on pages 331–337 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. In a multi-product company, flexible budgets usually are based on:
   A. actual input, such as direct labor hours
   B. standard allowed input
   C. actual output
   D. any of the above
   E. none of the above.

_____ 2. In standard costing, overhead is applied to production based on:
   A. the actual number of cost-driver input used times predetermined overhead rate
   B. the actual number of cost-driver input used times actual overhead rate
   C. the standard allowed hours of cost-driver input times actual overhead rate
   D. the standard allowed hours of cost-driver input times predetermined overhead rate
   E. none of the above.

_____ 3. In a three-way variance analysis:
   A. fixed spending and variable spending and efficiency variances are combined into one
   B. fixed and variable spending variances are combined into one
   C. fixed spending and volume variances are combined into one
   D. variable efficiency and fixed volume variances are combined into one
   E. none of the above.
Use the following data to answer questions 4–7:

Arman & Company makes two models of wheelchairs. Product A requires material per unit of $115 and direct labor per unit of $44. Product B requires material of $197 and direct labor of $86 per unit. Each unit of Product A requires three machine hours while Product B requires four machine hours. The forecast output for the year is 1,200 units of Product A and 1,800 units of Product B. Labor-related variable overhead amounts to $83,040 while machine-related overhead amounts to $248,400. Fixed overhead of $140,040 is computed as a percentage of prime costs.

4. Labor-related variable overhead rate amounts to:
   A. 30%
   B. 35%
   C. 40%
   D. 45%
   E. none of the above.

5. Fixed overhead rate amounts to:
   A. 15%
   B. 20%
   C. 25%
   D. 30%
   E. none of the above.

6. Total budget for product A amounts to:
   A. $322,880
   B. $332,880
   C. $828,800
   D. $838,800
   E. none of the above.

7. Cost per unit of product B (rounded) amounts to:
   A. 277
   B. 287
   C. 466
   D. 476
   E. none of the above.
Use the following data to answer questions 8–9.

Susan’s Cabinet Shop has total budgeted variable overhead of $220,000. Actual variable overhead for the period also amounted to $220,000. The overhead is based on direct labor hours. Other data on the two types of cabinets, M and N, are as follows:

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours per unit</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Production (in units)</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Actual hours per unit</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>Actual number of units</td>
<td>140</td>
<td>160</td>
</tr>
</tbody>
</table>

_____ 8. The variable overhead applied amounts to:
A. $212,000
B. $216,000
C. $220,000
D. $224,000
E. none of the above.

_____ 9. Variable overhead spending variance amounts to:
A. $15,000 UF
B. $15,000 F
C. $23,000 F
D. $23,000 UF
E. none of the above.

Use the following data to answer questions 10–11.

Omid Pen Company produces regular and deluxe pens. Budgeted fixed overhead amounts to $41,440. Actual fixed overhead amounts to $52,500. Other data follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Regular</th>
<th>Deluxe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeted machine hours per unit</td>
<td>0.20</td>
<td>0.30</td>
</tr>
<tr>
<td>Budgeted number of units</td>
<td>3,800</td>
<td>2,400</td>
</tr>
<tr>
<td>Actual number of units produced</td>
<td>3,900</td>
<td>2,900</td>
</tr>
</tbody>
</table>

_____ 10. Fixed overhead applied amounts to:
A. $43,200
B. $44,200
C. $45,200
D. $46,200
E. none of the above.
Lesson 15: Flexible Budgets

______ 11. Fixed overhead spending variance amounts to:
A. $4,760 F
B. $4,760 UF
C. $6,300 UF
D. $11,060 UF
E. $11,060 F.

______ 12. If actual and budgeted production are equal but actual fixed costs are higher than budgeted fixed costs, fixed overhead volume variance would be:
A. positive
B. negative
C. zero
D. impossible to determine
E. none of the above.

______ 13. An unfavorable fixed overhead volume variance is indicative of:
A. lower than expected efficiency
B. lower output
C. higher costs of operation
D. all of the above
E. both A and B.

______ 14. Which of the following variances would be least controllable by a production manager?
A. overhead volume
B. overhead efficiency
C. labor efficiency
D. material usage
E. overhead spending
Lesson 15: Flexible Budgets

Use the following data to respond to questions 15–17.

Omid Printing has decided to break up its overhead into unit level costs of $45,000 with the primary cost driver being labor hours of 9,000 hours; batch level costs of $15,000 with the cost driver being the number of batches, which is estimated to be 300; and product level costs of $21,000 related to the number of parts handled amounting to 10,500. Job one uses 95 labor hours, 3 batches, and 345 parts. Job two uses 125 labor hours, 7 batches, and 256 parts. The job allocations tie to the budget except that job one was supposed to use 125 labor hours and job two 95 hours. Also job one was supposed to use 4 batches and job two six batches.

_____ 15. The standard cost of job two amounts to:
A. $1,315
B. $1,487
C. $1,582
D. $1,610
E. none of the above.

_____ 16. Actual charge to job one (actual units at standard rates) amounts to:
A. $1,287
B. $1,515
C. $1,582
D. $1,610
E. none of the above.

_____ 17. What other data is needed for computing overhead spending variances?
A. actual level of cost driver used for each activity
B. actual costs related to each activity
C. actual volume of output
D. both A and C
E. both A and B
Lesson 15: Flexible Budgets

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 17.30, page 738; Exercise 17.32, pages 738–739; Problem 17.49, page 742
Lesson 16:
Org Design, Responsibility Accounting & Evaluation of Divisional Performance

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Explain the role of responsibility accounting in fostering goal or behavioral congruence
✓ List several benefits and costs of decentralization
✓ Describe the distinguishing characteristics of responsibility centers and their various types: a cost center, a discretionary cost center, a revenue center, a profit center, and an investment center
✓ Show how to prepare a performance report for various responsibility centers
✓ Demonstrate how to compute an investment center’s return on investment (ROI), residual income (RI), and economic value added (EVA)
✓ Explain how a manager can improve ROI by increasing either the sales margin or capital turnover
✓ Describe the pros and cons of using ROI and RI as divisional performance measures
✓ Explain various approaches for measuring a division’s income and invested capital

Key Terms

Understand key terms on page 781 of Hilton, Maher, & Selto.
Lesson Introduction

This chapter gives additional aspects of the control function. A part of controlling requires that evaluations of divisions and managers be performed as well as consideration given to overall goal congruence of managers and organizations.

To begin the evaluation process, you must first consider organizational structure. Organizational structure establishes lines of authority and responsibility. These lines are used to determine what can be controlled and by whom.

At the beginning of the chapter, organizational structure and responsibility accounting are discussed. You should understand the importance of the fact that when controlling must be performed, it cannot be done only at the top level of an organization. Therefore, management level and authority have significant roles to play.

To evaluate divisions of an organization, we can use three major tools: return on investment (ROI), residual income (RI), and economic value added (EVA). The results of these evaluation tools tell us how the division is performing and give us an indicator of whether the division should continue. The communication instrument for this information is the responsibility report.

As you move through the chapter, focus closely on the calculations as well as the meaning of the results. Finally, remember that numbers do not tell the entire picture by themselves. Nonfinancial measures also come into play. These measures are discussed briefly near the end of the chapter but will be discussed in much more detail in the final chapter.

Reading Assignment

Hilton, Maher, & Selto, Chapter 18, pages 754–781

Self Check

*Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.*

1. Read and review Chapter 18 “Chapter Highlights” on pages 351–360 in the SG.

Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

Use the following data to answer questions 1–6.

Omid Publishing Company has three divisions: A, B, and C. The revenues of these divisions are $29,000, $48,000, and $63,000 respectively. Variable costs of these divisions amount to 57%, 59%, and 64% of the given revenues. The divisions’ short-term controllable fixed costs are $4,200, $5,200, and $6,200 respectively. The divisions’ long-term controllable fixed costs amount to $3,800, $4,900, and $5,700 in the order given. The company’s uncontrollable costs amount to $7,150, and income tax is at 20% of operating income.

_____ 1. Short-term controllable margin for division A amounts to:
   A. $4,470
   B. $8,270
   C. $12,470
   D. $16,270
   E. none of the above.

_____ 2. Long-term controllable margin for division B amounts to:
   A. $9,580
   B. $14,480
   C. $19,680
   D. $23,580
   E. none of the above.

_____ 3. Division C’s contribution margin amounts to:
   A. $10,780
   B. $16,480
   C. $22,680
   D. $28,480
   E. none of the above.
**Lesson 16: Organizational Design**

_____ 4. Omid Publishing Company’s net income amounts to:
   A. $14,144
   B. $17,680
   C. $24,830
   D. $39,230
   E. none of the above.

_____ 5. Division A’s margin (rounded) amounts to:
   A. 15%
   B. 17%
   C. 18%
   D. 20%
   E. none of the above.

_____ 6. Division C’s margin (rounded) amounts to:
   A. 15%
   B. 17%
   C. 18%
   D. 20%
   E. none of the above.

*Use the following additional data to answer questions 7–12.*

Omid Company’s assets amount to $200,000, 20% of which is for division A and the balance split equally between divisions B and C. However, $8,000 of division B assets are unused fixed assets that are temporarily stored until they can be disposed of. Company’s required rate of return is at 9%.

_____ 7. Operating assets turnover for division A (rounded) amounts to:
   A. 67%
   B. 70%
   C. 73%
   D. 79%
   E. none of the above.

_____ 8. Operating assets turnover for the company amounts to (rounded):
   A. 67%
   B. 70%
   C. 73%
   D. 79%
   E. none of the above.
9. Return on investment for division B, using operating assets amounts to (rounded):
   A. 8.8%
   B. 11.1%
   C. 13.3%
   D. 13.5%
   E. none of the above.

10. Return on investment for division C amounts to (rounded):
    A. 8.8%
    B. 11.1%
    C. 13.3%
    D. 13.5%
    E. none of the above.

11. Residual income for division B, using operating assets, amounts to:
    A. $400
    B. $870
    C. $3,100
    D. $3,580
    E. none of the above.

12. Residual income for the company, using operating assets, amounts to:
    A. $400
    B. $870
    C. $3,100
    D. $3,580
    E. none of the above.

13. To improve margin in conjunction with ROI computations:
    A. sales may be increased
    B. income may be increased
    C. assets may be increased
    D. assets may be decreased
    E. both A and D.

14. An advantage of ROI is that it encourages managers to:
    A. accept projects which provide returns in excess of the company’s required rate of return
    B. attempt to increase asset turnover
    C. attempt to increase the margin
    D. do all of the above
    E. do both B and C.
Lesson 16: Organizational Design

_____ 15. An advantage of EVA over RI is that:
A. it excludes current liabilities from total investment
B. it uses imputed interest rate
C. it uses income before interest and taxes
D. all of the above
E. both A and C.

_____ 16. Cost of long-term debt is computed by dividing:
A. before-tax interest divided by book value of debt
B. after-tax interest divided by book value of debt
C. before-tax interest divided by market value of debt
D. after-tax interest divided by market value of debt
E. none of the above.

_____ 17. Cost of equity capital is computed by dividing:
A. income before tax divided by cost of equity
B. income after tax divided by cost of equity
C. income after tax divided by market value of equity
D. income before tax divided by market value of equity
E. none of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 18.25, page 784; Exercise 18.27, pages 784–785; Problem 18.28, page 785; Exercise 18.33, pages 786; Problem 18.34, page 786
Lesson 17: Transfer Pricing

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Explain the purpose and role of transfer pricing
✓ Explain how to use a general economic rule to set an optimal transfer price
✓ Explain how to base a transfer price on market prices, costs, or negotiations
✓ Discuss the implications of transfer pricing in a multinational company
✓ Discuss the effects of transfer pricing on segment reporting

Key Terms

Understand key terms on page 813 of Hilton, Maher, & Selto.

Lesson Introduction

Up to this point we have concentrated on the cost of units that we make and how much we should sell them for to those outside of our organization. These purchasers are called external customers. But organizations often have “internal” customers too. These are the divisions within our own organization. Transfer pricing is the price at which an organization transfers goods between its own divisions.

Most businesses have a profit motive as their chief objective. The price that is established for outside customers keeps this objective in mind. However, when selling to internal customers, profit is not the primary objective. This situation presents a dilemma for managers since they are usually evaluated on the basis of profitability.

Selling goods within the organization does not always make a lot of sense when we consider that the company’s overall objective is to make a profit. Making profit off another division is analogous to taking money from one pocket in a pair of pants and simply putting it into another pocket of the same pair. However, from an individual pocket perspective, one is short funds and the other gains funds after the transaction is completed. To resolve this dilemma
Lesson 17: Transfer Pricing

top management usually has to establish guidelines for pricing internal transfers.

In theory, the selling division should be in no worse position and the buying division should be in no better position after the internal transfer than they would be if each transacted with an outsider. Keep this in mind as you cover the material of this chapter. But also keep in mind the “greater good” theory of the organization. Transfer pricing usually works out for the benefit of everyone, division managers and the organization, if everyone plays fair. However, sometimes that does not happen, and top management has to intervene.

The following lesson will be the final one in this course. Keep working hard so you can successfully reach the end.

Reading Assignment

Hilton, Maher, & Selto, Chapter 19, pages 798–813

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 19 “Chapter Highlights” on pages 373–378 in the SG.


Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

1. If there is excess capacity, the transfer price is often:
   A. market price
   B. opportunity cost plus incremental cost
   C. variable cost or variable cost plus profit
   D. full cost plus profit
E. either A or B.

2. A dual transfer pricing system is set up where:
   A. the two sides cannot agree on a price and the difference in price between the two sides is absorbed by the home office
   B. a ready market price is not available and the two sides must come up with an agreeable price
   C. the buyer buys at variable cost and the seller only sells at full cost
   D. the two sides agree to use a cost basis for transfer pricing
   E. none of the above.

3. If variable cost is used in transfer pricing, it is preferable to use:
   A. standard variable cost because the buyer does not wish to be stuck with inefficiencies of the selling division
   B. standard variable cost because the seller does not wish to pass along the variations in cost
   C. actual variable cost because the buyer is well-advised to deal with the real rather than anticipated costs
   D. actual variable costs because the seller is well-advised to deal with the real rather than anticipated costs
   E. none of the above.

4. The objective(s) of transfer pricing is/are:
   A. to motivate managers
   B. to provide an incentive for managers to make decisions consistent with the firm’s goals
   C. to provide a basis for fairly rewarding the managers
   D. all of the above
   E. both B and C.

5. The basic methods used in transfer pricing are:
   A. variable or full costs
   B. dual prices
   C. market price or negotiated price
   D. all of the above
   E. both B and C.
Lesson 17: Transfer Pricing

_____ 6. To minimize taxes, some multinational companies set high transfer prices:
   A. when goods are shipped from low tax countries to other low tax countries
   B. when goods are shipped from low tax countries to high tax countries
   C. when goods are shipped from high tax countries to low tax countries
   D. either A or B
   E. either A or C.

_____ 7. The market pricing approach in transfer pricing:
   A. helps to preserve unit autonomy
   B. provides incentive for the selling unit to be competitive with outside suppliers
   C. has arm’s-length standard desired by taxing authorities
   D. may be the most practical approach when there is significant conflict
   E. all except D.

_____ 8. The variable costing method of transfer pricing is:
   A. easy to implement
   B. intuitive and easily understood
   C. more logical when there is excess capacity
   D. all of the above
   E. both A and B.

Use the following data to answer questions 9–12.

US-UK Multinational transfers 500 units of televisions from the US to the UK. The televisions cost $280 a unit (60% of which is variable cost). The market price for these televisions is at $390 each. The US division’s incremental tax rate is at 30%, whereas the UK taxes are at 55%. The UK subsidiary incurs a cost of $24 per set and sells the units for $430 a unit.

_____ 9. US division’s profit after tax using market transfer prices amounts to:
   A. $36,000
   B. $38,500
   C. $42,100
   D. $44,800
   E. none of the above.
10. UK division’s profit after tax using total cost for transfer pricing amounts to:
A. $20,350  
B. $24,350  
C. $26,350  
D. $28,350  
E. none of the above.

11. US division’s profit (loss) after tax using variable costs for transfer pricing amounts to:
A. $39,200  
B. ($39,200)  
C. $53,550  
D. ($53,550)  
E. none of the above.

12. UK division’s profit (loss) after tax using variable costs plus a mark-up of 30% for transfer pricing amounts to:
A. $42,210  
B. ($42,210)  
C. $21,560  
D. ($21,560)  
E. none of the above.

Use this data to respond to questions 13–15.

N&R Company transfers a product from division N to division R. Variable cost of this product is anticipated to be $40 a unit and total fixed costs amount to $8,000. A total of 100 units are anticipated to be produced. Actual cost, however, amounts to $50 for variable costs. Fixed costs were same as budget. However, actual output was twice as many.

13. Budgeted cost per unit amounts to:
A. $90  
B. $92  
C. $115  
D. $120  
E. none of the above.
Lesson 17: Transfer Pricing

14. The transfer price based on budgeted variable costs plus 130% markup amounts to:
   A. $90
   B. $92
   C. $115
   D. $120
   E. none of the above.

15. The transfer price based on actual full cost plus 30% markup amounts to:
   A. $117
   B. $140
   C. $150
   D. $156
   E. none of the above.

16. The forecasted market price was $150 a unit. The actual price was $140. It was anticipated that marketing and packaging costs, which general customers require and internal transfer does not require, amounts to $12. The actual non-required costs per unit amount to $11. The negotiated transfer price based on budgeted market price should be:
   A. $126
   B. $129
   C. $135
   D. $138
   E. none of the above.

17. Transfer pricing is used in:
   A. centralized companies
   B. only international companies
   C. only domestic firms
   D. only companies that need to minimize foreign taxation
   E. none of the above.

18. Company X has two divisions, Y and Z. Y can produce 2,000 units of M. It can currently sell 1,800 units to the outside market. Total cost per unit is $29 with a total fixed cost of $18,000. The product sells for $33 per unit. Z needs 200 units a period. What should be the minimum transfer price for the 200 units?
   A. $19
   B. $26
   C. $31
   D. $33
   E. none of the above
19. Company X has two divisions, Y and Z. Y can produce 2,000 units of M. It can currently sell 1,800 units to the outside market. Total cost per unit is $29 with a total fixed cost of $18,000. The product sells for $33 per unit. Z needs 400 units a period. What should be the minimum transfer price for the 400 units?
A. $19
B. $26
C. $31
D. $33
E. none of the above

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Hilton, Maher, & Selto: Exercise 19.20 page 815; Exercise 19.21 page 815;
Exercise 19.22, page 815; Problem 19.23, page 815;
Exercise 19.24, pages 815–816; Problem 19.26, page 816
Lesson 18: Strategy, Balanced Scorecards, and Incentive Systems

Lesson Objectives

After you have completed this lesson, you should be able to do the following:

✓ Recognize and recommend lead indicators in the areas of organizational learning and growth, business production process efficiency, and customer value
✓ Explain the importance of lead indicators in building a balanced scorecard for communication, motivation, and evaluation
✓ Explain the benefits and costs of a balanced scorecard
✓ Explain how organizations implement a balanced scorecard of performance measures
✓ Understand the key principles of performance-based incentive systems
✓ Evaluate the advantages and disadvantages of alternative features of incentive systems
✓ Discuss ethical issues of incentive systems

Key Terms

Understand key terms on page 863 of Hilton, Maher, & Selto.

Lesson Introduction

This final chapter covers ways in which organizations assure that the overall company goals and a manager’s goals are in alignment. Organizations must constantly define and adjust ways to make sure that goals are communicated and implemented. Keeping employees motivated toward achieving stated goals and assuring that customers remain satisfied are vital to success.
Traditionally, organizations have relied exclusively on financial information to evaluate both company success and employee performance. The customer satisfaction aspect was only indicated in the volume of sales. Now organizations can use a tool called the balanced scorecard. This tool allows organizations to focus on four major areas:

1. organizational learning and growth
2. business production process performance
3. customer performance
4. financial performance

The balanced scorecard allows the organization to evaluate its performance from within as well as from outside the organization. It no longer needs to rely just on the feedback from financial data. The balanced scorecard gives the organization the opportunity to assess its processes, evaluate practices with employees, and take corrective action before it incurs exorbitant losses from trial-and-error actions.

Study this section well. You will probably be subjected to the balanced scorecard in your employment position. The actual documents and goals may vary from business to business, but the overall areas of assessment are very similar.

Finally, the area of incentive compensation for employees is covered. There are wide differences as well as likenesses in this concept. The one common factor is that the employee should know on the front end of employment how they will be evaluated. Goal setting should involve both the employee as well as the supervisor.

You have reached the end of this course. Pat yourself on the back. You endured through it. All that is left is the final exam. Good luck with your studying!

**Reading Assignment**

Hilton, Maher, & Selto, Chapter 20, pages 826–859 (omit appendix)
Lesson 18: Strategy, Balanced Scorecards, and Incentive Systems

Self Check

Read and complete the following. Check your answer to the activities against the solutions provided at the end of the chapter. Do not submit self-check activities for grading.

1. Read and review Chapter 20 “Chapter Highlights” on pages 395–404 in the SG.


Lesson Assignment

Complete the following and submit to LSU Independent & Distance Learning for grading. Be sure to follow the guidelines under “Preparation of Lesson Assignments” in the course syllabus. This lesson assignment is worth 5 possible points.

Part A: List the question number and write the answer you have selected (A, B, C, etc.) on your paper. You do not need to retype the questions and each answer or duplicate the multiple choice question page.

_____ 1. Lead indicators:
   A. are measures of final outcomes of management plans and their execution
   B. are measures of early value-chain operations that signal future outcomes of later operations
   C. help decision makers predict later problems and prevent costly mistakes
   D. both B and C
   E. none of the above.

_____ 2. Major type(s) of lag indicators are/is:
   A. organizational learning and growth
   B. business and manufacturing process efficiency
   C. customer satisfaction and loyalty
   D. all of the above
   E. financial statements and inventory values.
Lesson 18: Strategy, Balanced Scorecards, and Incentive Systems

3. The balanced scorecard is:
   A. a causal model of lead indicators of performance
   B. a causal model of lag indicators of performance
   C. a causal model of lead and lag indicators of performance
   D. a cause-and-effect relationship model of financial indicators of performance
   E. none of the above.

4. The learning and growth dimension of the balanced scorecard may include:
   A. employee training and education
   B. employee satisfaction
   C. employee turnover
   D. innovations
   E. all of the above.

5. The learning and growth dimension of the balanced scorecard may include:
   A. innovations
   B. opportunities for improvement
   C. supplier relations
   D. all of the above
   E. A and B only.

6. Business and production processes efficiency may include:
   A. new service development
   B. employee productivity and error rates
   C. service costs
   D. all of the above
   E. A and B only.

7. Dimensions of company performance may include:
   A. learning and growth
   B. business and production process efficiency
   C. customer value and financial performance
   D. all of the above
   E. B and C only.

8. Proactive use of the balanced scorecard can lead to:
   A. creation of customer value at lower cost
   B. loyal customers who continue to buy the firm’s products
   C. increased profitability
   D. all of the above
   E. B and C only.
Lesson 18: Strategy, Balanced Scorecards, and Incentive Systems

9. An upstream element in a financial planning model may be:
   A. change in retention of existing customers
   B. change in gross margin ratio
   C. change in the number of bank accounts
   D. all of the above
   E. A and B only.

10. The balanced scorecard normally includes a report that consists of:
    A. the factors of customer satisfaction, customer retention, and growth in market share
    B. the factors of employee retention and employee training
    C. the factors of promoting higher quality and higher productivity rates
    D. the factors of financial, customer, learning and growth, and internal business perspectives
    E. none of the above.

11. The financial perspective of the balanced scorecard includes:
    A. the factors of customer satisfaction, customer retention, and growth in market share
    B. the factors of employee retention and employee training
    C. the factors of promoting higher quality and higher productivity rates
    D. the factors of financial, customer, learning and growth, and internal business perspectives
    E. none of the above.

12. A measure of performance in learning and growth could be:
    A. employee turnover rate
    B. employee hours spent in training
    C. estimating the value of employee suggestions
    D. all of the above
    E. A and B only.

13. A measure of performance on customer perspective could be:
    A. the percent of customers retained each year
    B. the percent of companies in the region who do business with the firm
    C. the amount of return on assets
    D. all of the above
    E. A and B only.
14. An internal business and production process measure of performance could be:
A. return on equity
B. growth in market value of shares
C. employee productivity and error rates
D. all of the above
E. A and B only.

Use the following data to answer questions 15–16.

A+ Consulting rewards its managers based on performance. One measure of performance is profitability. Another measure may be growth in stock value. Profit has decreased by 50% from prior year amount of $80,000, and stock value has increased by 20% from its prior year level of $200,000.

15. If a manager’s compensation is based on 25% of profits, his compensation for the prior year amounts to:
A. $60,000
B. $50,000
C. $30,000
D. $20,000
E. none of the above.

16. If manager’s compensation is based on 25% of the value of stocks, his compensation for the current year amounts to:
A. $60,000
B. $50,000
C. $30,000
D. $20,000
E. none of the above.

17. B+ Company bases its managers’ rewards on overall performance. The two managers receive 40% of the overall profit, which is divided equally between them. Division 1 had a profit of $90,000, and division 2 had a profit of $210,000. Division 1 manager’s profit sharing amounts to:
A. $36,000
B. $84,000
C. $60,000
D. $120,000
E. none of the above.
18. C+ Company bases its managers’ rewards on divisional performance. Each manager receives 40% of the division’s profit less $10,000 for reserves, which is subtracted from profit before distribution of the balance to the manager. Division 1 had a profit of $90,000, and division 2 had a profit of $210,000. Division 1 manager’s profit sharing amounts to:
   A. $32,000  
   B. $36,000  
   C. $80,000  
   D. $84,000  
   E. none of the above.

Part B: Complete the following exercises found in the textbook and submit with the questions above. Do not copy the question, but write a complete answer for each question.

Exclude all problem parts that ask for the use of Excel.

Final Examination

Preparation

It is now time to prepare for and take the final-course examination

YOU MUST PASS THE FINAL EXAMINATION
IN ORDER TO PASS THE COURSE.

About the Final Examination

The final examination covers Lessons 13 through 18 and consists of 40 multiple choice questions and 1 long problem. The exam will be worth 100 points. The multiple choice questions will be worth 2 points each and the long problem worth 20 points. You will have three hours to complete the exam. You may not use graphing calculators for the exam; a financial or business calculator is acceptable.

NOTE: The listing below is intended to help guide your study. However, it is not intended to suggest that this is the entirety of the testable materials. Any material from the textbook (chapter narratives and end-of-chapter materials), the study guide, and the course guide (self check and lesson assignments) is valid for exam coverage.

Make sure that you understand the concept, computation, and application of theory for the following:

Lesson 13 – Budgeting and Financial Planning
• Purpose for budgeting
• The master budget process
• Operating budgets (purpose and computations):
  o Sales budget
  o Production budget
  o Materials budget
  o Direct labor budget
  o Manufacturing overhead budget
Final Examination

- Selling and administrative budget
  - Cash collections schedule
  - Cash payments schedule

Lesson 14 – Standard Costing, Variance Analysis, and Kaizen Costing
- Purpose, establishment, and use of standard costs
- Definition and distinction between perfection and practical standards
- Determination and meaning of direct materials variances
- Determination and meaning of direct labor variances

Lesson 15 – Flexible Budgets, Overhead Cost Management, & Activity-Based Budgeting
- Concept and computations related to flexible budgets
- The impact of flexible on both variable and fixed costs
- Issues related to overhead budgeting and application
- Determination and meaning of variable overhead variances
- Determination and meaning of fixed overhead variances

Lesson 16 – Organizational Design, Responsibility Accounting, & Evaluation of Divisional Performance
- The role and use of responsibility accounting in an organization
- The distinguishing characteristics of responsibility centers
- The need and use of divisional performance evaluations in an organization
- Computations of several performance evaluation tools
- Return on investment (ROI) and its individual components (margin and turnover)
- Residual income (RI)
- Economic value added (EVA)

Lesson 17 – Transfer Pricing
- Transfer pricing in organizations
- Minimum transfer prices
- Negotiated transfer prices
- The effect of income taxes on transfer prices

Lesson 18 – Strategy, Balanced Scorecards, and Incentive Systems
- The purpose of organizational evaluations
- The four areas of a balanced scorecard
- The meaning of the components of a balanced scorecard
- Lead and lag indicators

If you prepare diligently, you should do well. Good luck!
Transcript Information

After you have completed this course, your grade will be filed with the Office of the University Registrar. If a transcript is needed, it is your responsibility to make a request in writing to:

Office of the University Registrar
Louisiana State University
Thomas Boyd Hall
Baton Rouge, LA  70803
FAX: 225-578-5991

To the Student

Congratulations on finishing the lesson assignments for your course. We hope you will continue your education by taking another course with us.

Our current bulletin is available online at www.outreach.lsu.edu/idl. If you would like to receive a copy of our latest bulletin, you can contact us by calling 800-234-5046. If you know which course you want, you can register on-line or request an enrollment form from our office and send it to us. We look forward to hearing from you!
Appendix A

Contents

- College Examination Information
- Exam Proctor Information Form
- Electronic Submission Options
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College Examination Information

Information for All Students

Please follow these regulations:

You will only be allowed to take your examination when the IDL office has received and accepted all the assigned lessons.

You must bring a picture I.D. to your examination.

For additional rules concerning exam procedures, please refer to the Syllabus and Exam sections of this course guide.

If you change an exam proctor or address, you must notify IDL immediately so your exams can be routed correctly.

If you will take your exam at LSU-Baton Rouge, refer to the information in Section A, below.

If you cannot take your exam at LSU-Baton Rouge, refer to the information in Section B.

SECTION A

Information for Students Taking Examinations at LSU-Baton Rouge

The IDL office is open from 8:00 a.m. to 4:30 p.m., Monday through Friday. You must begin your exam by 1:30 p.m.

For most exams you do not need to make an appointment but it is highly recommended. However, for exams that require access to a computer, typewriter, or other special equipment, you must schedule your exam at least two days before you wish to take it (see the specific information in the Syllabus and Exam sections of this course guide for details).
SECTION B

Information for Students Who Cannot Take Their Examinations at LSU-Baton Rouge

• Make arrangements with one of the following local officials to act as your testing supervisor:

  College students → Testing center of an accredited college/university, college administrator or UCEA Correspondence Study Department

  Overseas students → American University (school) or American Embassy

  Military personnel → Education office at the military base, or college locations listed above

• You must submit complete Exam Proctor Information using the form in the Appendix of this course guide, or online. If you have access to the Internet, you may submit this information electronically via StudyNet, the LSU IDL online student service center, at www.is.lsu.edu/studynet. Select “proctor information” from the navigation menu on the left for access to the online form.

You need to submit only one proctor information form per course to the IDL office. Any subsequent exams you need to take for the same course will be sent to the same proctor.

The proctor information form should be submitted as soon as you have found a proctor and must be received by the IDL office at least three lessons before you are ready to take your exam. Receipt of this form by the IDL office does not mean your exam will be sent immediately. Your exam will be mailed to your proctor after the IDL office has received and accepted all lessons that must be completed prior to taking the exam.

Your exam proctor will hold your examination for no longer than thirty days. You should check to be certain the exam has arrived; if not, notify this office immediately. You must make arrangements for a time to take your exam, and you are responsible for any proctor fees.

If you change an exam proctor or address, please notify IDL immediately so your exams can be routed correctly.
Exam Proctor Information Form

Before you complete this form, please read the preceding examination information.

Directions

- If you will take your exam at LSU-Baton Rouge, you do not need to complete this form.
- Do not send this form with one of your lessons; send it separately to the IDL office.
- If you have any questions concerning this form, please call the IDL office at 225-578-3920 or 800-234-5046.
- If you have access to the Internet, you may submit this information electronically via StudyNet, the LSU IDL online student service center, at www.is.lsu.edu/studynet. Select “proctor information” from the navigation menu on the left for access to the online form.

Enrollment Number _______________________________________________________________
Course Name ______________________________________________________________________
Student Name _____________________________________________________________________
Address ____________________________________________________________________________
Telephone __________________________ E-mail ____________________________________

☐ Check the box if this is an address change from your original enrollment.

Complete the information below with reference to the person who will proctor your exam.

Exam Proctor’s Name _______________________________________________________________
Exam Proctor’s Title ________________________________________________________________
Office Telephone __________________________________________________________________
E-mail Address _________________________________________________________________
College/University _________________________________________________________________
Department/Section _______________________________________________________________
Building, Street, or P. O. Box _______________________________________________________
City, State, Zip Code ______________________________________________________________

Mail to: LSU Independent & Distance Learning
1225 Pleasant Hall
Louisiana State University
Baton Rouge, LA 70803
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Electronic Submission Options

This LSU Independent & Distance Learning (IDL) course offers electronic submission of lesson assignments. If you have access to a computer and the Internet, you can submit lessons online instead of through the mail. Or, you may mail your lesson assignments in the traditional manner, using the U.S. Postal Service.

What is ISO?

ISO is the LSU IDL online course system that allows you to submit your lesson assignments electronically, over the Internet. Electronic submissions reduce mailing delays and speed delivery of your assignment to LSU IDL. Course guide materials are available over the Internet for many courses.

When we receive your lesson assignment, it will be forwarded to your instructor. You will receive a confirmation e-mail to let you know your assignment was received.

Most assignments will be printed and graded by an instructor on paper. Graded paper lesson assignments will be returned to you through the mail with instructor comments. If your course includes computer-graded lesson assignments, they will be scored immediately.

How do I get started?

Submitting lessons electronically is an option, not a requirement. If you would like to explore ISO, read the information below to find out what you need to begin.

You should also review the online orientation on our Web site for complete step-by-step directions on how to use ISO and submit lessons online. To locate the orientation information from the IDL main page, select >college home>online courses >orientation from the navigation menu. Most computers purchased in the past three years will have everything you need. Computers at public libraries and schools also should be sufficient.

How soon can I begin working on my online course?

Before you can submit an assignment, you need to have your textbook and any other required materials. Complete the readings assigned in the course guide, then answer essay-style and short-answer questions using Microsoft Word, Microsoft Excel, or Corel WordPerfect.

For multiple-choice and matching items, mark answers in your printed course guide then transfer them to a Word, Excel, or WordPerfect file. **All questions in a lesson assignment must be answered in a single file.** When you have completed a lesson assignment, you are ready to log in to the course and submit your assignment online.
From the IDL main page, select >enrolled students >online course login from the menu bar. If this is the first time you are accessing an online course, you may wish to review the orientation section of our Web site (select the orientation link from the online courses menu). You will be prompted for your user ID and password. Follow the on-screen instructions to submit your lesson. Most courses allow you to upload a single file that you have saved on your computer. Only one file can be uploaded for a single lesson.

**How do I get my User ID and password?**

**User ID:** Your user ID is the six-digit enrollment number that you received with your course materials and in your enrollment confirmation e-mail. The enrollment number is printed on your receipt and on your lesson submission labels.

**Password:** Your password is the first two letters of your last name and last four digits of your social security number. The password is case sensitive, so make sure that the first letter of your last name is upper case and the second letter is lower case.

For example: John Smith  
SSN: 123-45-6789  
Password: Sm6789

For each course in which you enroll, you receive a unique enrollment number that serves as your user ID for that course. However, your password will be the same for every course you take with LSU IDL.

**Computer Requirements**

**Hardware and Software Requirements**

Because LSU IDL online course materials are available through the Internet, you will need to have access to a computer and the hardware and software resources needed to access the Internet.

**Computer**

The computer you use to submit assignments must be have enough memory and processing power to operate a recent version of a Web browser and to download files in a reasonable amount of time.

- **Minimum system requirements:**  
  486 75 MHz personal computer (or its equivalent Apple or SUN/Unix machine) with at least 8 megabytes of RAM.

- **Recommended system requirements:** Pentium class personal computer (or its equivalent Apple or SUN/Unix machine) with at least 16 megabytes of RAM.
Internet Access

You will need to be able to reach the Internet, either through a network at your place of business or school or through a DSL connection, cable modem, or dial-up modem from home. If you use a dial-up modem, the speed should be at least 28.8 bps. If possible, use an Internet service provider that has a local access number, so that you can avoid long-distance connection charges.

Web Browser

Web browsers, such as Netscape, Internet Explorer, and Firefox, are used by a computer to navigate the Internet. To access our courses, you must use a browser that is both Java and JavaScript enabled. This option needs to be set in the preferences of your browser.

If you do not have Netscape, Internet Explorer, or Firefox, you can download the latest free versions to install on your computer using the links on our online orientation page.

E-mail Account

You need to have a valid e-mail address, so that we can confirm receipt of your lesson assignments. If you do not have an e-mail account as part of your Internet access, you may subscribe to one of the many free e-mail services available.