

**ITT Technical Institute**  
**IE2620T**  
**Cost Estimating**  
**Onsite and Online Course**

**SYLLABUS**

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**Credit hours:** 4.5


**Contact/Instructional hours:** 67 (41 Theory Hours, 26 Lab Hours)

**Prerequisite(s) and/or Corequisite(s):**

Prerequisite: IE1320T Lean Manufacturing or equivalent

**Course Description:**

This course introduces cost estimating for labor, materials and overhead for products, systems and projects. Topics include budgets and cost accounting.



## COURSE SUMMARY

### COURSE DESCRIPTION

This course introduces cost estimating for labor, materials and overhead for products, systems and projects. Topics include budgets and cost accounting.

### MAJOR INSTRUCTIONAL AREAS

- Product Costing
- Process Costing
- Operating Budgets
- Balanced Scorecard

### COURSE LEARNING OBJECTIVES

By the end of this course, you should be able to:

1. Explain the five-step decision-making process and its role in management accounting.
2. Define the various cost types including direct, indirect, variable, fixed, inventoriable, and period.
3. Use cost-volume-profit (CVP) analysis to plan variable and fixed costs.
4. Estimate the cost of a job using the seven-step approach to normal costing.
5. Evaluate the product cost using activity-based costing.
6. Describe the master budget and explain its benefits.
7. Prepare the operating budget and its supporting schedules.
8. Explain the basic concepts of process costing and compute average unit costs.
9. Describe the five steps in process costing and calculate equivalent units.
10. Define spoilage, rework, and scrap.
11. Explain the four cost categories in a costs-of-quality program.
12. Estimate cost functions on the basis of analysis of cost drivers.
13. Make cost allocation decisions based on cost-benefit analysis.

## COURSE OUTLINE

**MODULE 1: INTRODUCTION TO COST ACCOUNTING**

**COURSE LEARNING OBJECTIVES COVERED**

- Explain the five-step decision-making process and its role in management accounting.
- Define the various cost types including direct, indirect, variable, fixed, inventoriable, and period.

**TOPICS COVERED**

- Strategic Decisions and Management Accounting
- Basics of Cost Accounting

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 1 and 2	No	7.5 hours
<b>Lesson:</b> Study the lesson for this module.	No	1.5 hours
<b>Discussion:</b> Participate in the discussion titled “Strategic Decisions and Management Accounting.”	Yes	N/A
<b>Lab:</b> Complete the lab titled “Costs and Costing.”	Yes	N/A
<b>Project:</b> Read and begin the project.	No	0.5 hour

Total Out-of-Class Activities: 9.5 Hours

**MODULE 2: COSTING METHODS AND ANALYSIS**

**COURSE LEARNING OBJECTIVES COVERED**

- Use cost-volume-profit (CVP) analysis to plan variable and fixed costs.
- Estimate the cost of a job using the seven-step approach to normal costing.
- Evaluate the product cost using activity-based costing.

**TOPICS COVERED**

- Cost-Volume-Profit Analysis
- Job Costing
- Activity-Based Costing

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF- CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 3, 4, 5, and 11	No	9 hours
<b>Lesson:</b> Study the lesson for this module.	No	1.5 hours
<b>Discussion:</b> Participate in the discussion titled “CVP Analysis.”	Yes	N/A
<b>Exercise:</b> Submit the exercise titled “CVP Computations.”	Yes	1.5 hours
<b>Lab 1:</b> Complete the lab titled “Proration of Overhead.”	Yes	N/A
<b>Lab 2:</b> Complete the lab titled “Activity-Based Costing.”	Yes	N/A
<b>Project:</b> Continue work on Project Part 1.	No	2 hours

Total Out-of-Class Activities: 14 Hours

**MODULE 3: BUDGETING AND COST ANALYSIS**

**COURSE LEARNING OBJECTIVES COVERED**

- Explain the five-step decision-making process and its role in management accounting.
- Define the various cost types including direct, indirect, variable, fixed, inventoriable, and period.
- Use cost-volume-profit (CVP) analysis to plan variable and fixed costs.
- Evaluate the product cost using activity-based costing.
- Describe the master budget and explain its benefits.
- Prepare the operating budget and its supporting schedules.
- Explain the basic concepts of process costing and compute average unit costs.
- Make cost allocation decisions based on cost-benefit analysis.

**TOPICS COVERED**

- The Master Budget and Its Supporting Schedule
- Responsibility Accounting
- Budgeting and Cost Analysis

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF- CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 6, 7, 8, and 9	No	12.5 hours
<b>Lesson:</b> Study the lesson for this module.	No	1.5 hours
<b>Discussion:</b> Participate in the discussion titled “Benefits of Budgets.”	Yes	N/A
<b>Exercise:</b> Submit the exercise titled “Cost Variance and Capacity Analysis.”	Yes	1.5 hours
<b>Lab:</b> Complete the lab titled “Comprehensive Operating Budget.”	Yes	N/A
<b>Project:</b> Submit Project Part 1.	Yes	3 hours

Total Out-of-Class Activities: 18.5 Hours

## MODULE 4: PROCESS COSTING AND COST OF QUALITY

### COURSE LEARNING OBJECTIVES COVERED

- Explain the basic concepts of process costing and compute average unit costs.
- Describe the five steps in process costing and calculate equivalent units.
- Define spoilage, rework, and scrap.
- Explain the four cost categories in a costs-of-quality program.

### TOPICS COVERED

- Process Costing
- Spoilage, Scrap, and Rework Cost
- Cost of Quality

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF- CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 12 (pp. 475–476 and 487–496), 17, 18, and 19	No	10 hours
<b>Lesson:</b> Study the lesson for this module.	No	1.5 hours
<b>Discussion:</b> Participate in the discussion titled “Process Costing.”	Yes	N/A
<b>Exercise:</b> Submit the exercise titled “Determining Equivalent Units.”	Yes	1.5 hours
<b>Lab 1:</b> Complete the lab titled “Spoilage, Rework, and Scrap in Job Costing.”	Yes	N/A
<b>Lab 2:</b> Complete the lab titled “Cost of Quality Analysis.”	Yes	N/A
<b>Project:</b> Continue work on Project Part 2.	No	3 hours

Total Out-of-Class Activities: 16 Hours

**MODULE 5: COST MANAGEMENT AND DECISION-MAKING**

**COURSE LEARNING OBJECTIVES COVERED**

- Define the various cost types including direct, indirect, variable, fixed, inventoriable, and period.
- Estimate cost functions on the basis of analysis of cost drivers.

**TOPICS COVERED**

- Cost Behavior
- Costing and Decision-Making
- Evaluation and Identification of Cost Drivers

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 10 and 13	No	7.5 hours
<b>Lesson:</b> Study the lesson for this module.	No	1 hour
<b>Discussion:</b> Participate in the discussion titled “Cost Behavior.”	Yes	1 hour
<b>Exercise:</b> Submit the exercise titled “Cost Identification and Cost Decisions.”	Yes	1.5 hours
<b>Lab:</b> Complete the lab titled “Cost Drivers and Cost Functions.”	Yes	N/A
<b>Project:</b> Submit Project Part 2.	Yes	1 hour
<b>Final Exam:</b> Prepare for the final exam.	No	5 hours

Total Out-of-Class Activities: 17 Hours

**MODULE 6: COST ALLOCATION**

**COURSE LEARNING OBJECTIVES COVERED**

- Explain the five-step decision-making process and its role in management accounting.
- Define the various cost types including direct, indirect, variable, fixed, inventoriable, and period.
- Use cost-volume-profit (CVP) analysis to plan variable and fixed costs.
- Estimate the cost of a job using the seven-step approach to normal costing.
- Evaluate the product cost using activity-based costing.
- Describe the master budget and explain its benefits.
- Prepare the operating budget and its supporting schedules.
- Explain the basic concepts of process costing and compute average unit costs.
- Describe the five steps in process costing and calculate equivalent units.
- Define spoilage, rework, and scrap.
- Explain the four cost categories in a costs-of-quality program.
- Estimate cost functions on the basis of analysis of cost drivers.
- Make cost allocation decisions based on cost-benefit analysis.

**TOPICS COVERED**

- Cost Allocation Methods

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF- CLASS TIME
<b>Reading:</b> Horngren, C. T., Datar, S. M., Rajan, M. V., Chapters 14, 15, and 16	No	7 hours
<b>Lesson:</b> Study the lesson for this module.	No	1.5 hours
<b>Lab:</b> Complete the lab titled “Cost Allocation and Decision-Making.”	Yes	N/A
<b>Final Exam:</b> Take the final exam.	Yes	N/A

Total Out-of-Class Activities: 8.5 Hours



## EVALUATION AND GRADING

### EVALUATION CRITERIA

The graded assignments will be evaluated using the following weighted categories:

CATEGORY	WEIGHT
Exercise	20%
Lab	30%
Project	20%
Discussion	10%
Final Exam	20%
TOTAL	100%

### GRADE CONVERSION

The final grades will be calculated from the percentages earned in the course, as follows:

GRADE	PERCENTAGE
A (4.0 )	90–100%
B+ (3.5 )	85–89%
B (3.0 )	80–84%
C+ (2.5 )	75–79%
C (2.0 )	70–74%
D+ (1.5 )	65–69%
D (1.0)	60–64%

)	
F (0.0 )	<60%

## LEARNING MATERIALS AND REFERENCES

### REQUIRED RESOURCES

#### COMPLETE TEXTBOOK PACKAGE

- Horngren, C. T., Datar, S. M., & Rajan, M. V. (2015). *Cost Accounting: A Managerial Emphasis (15th ed.)*. Upper Saddle River, NJ: Prentice Hall.

### RECOMMENDED RESOURCES

- ITT Tech Virtual Library (accessed via Student Portal | <https://studentportal.itt-tech.edu>)
  - Basic Search>
    - Dearman, D. T., & Shields, M. D. (2005). Avoiding Accounting Fixation: Determinants of Cognitive Adaptation to Differences in Accounting Method. *Contemporary Accounting Research*, 22(2), 351-384.
    - Hansen, S. C., & Magee, R. P. (1993). Capacity Cost and Capacity Allocation. *Contemporary Accounting Research*, 9(2), 635-660.
    - Mastilak, M. (2011). Cost Pool Classification and Judgment Performance. *Accounting Review*, 86(5), 1709-1729. doi:10.2308/accr-10103

## INSTRUCTIONAL METHODS AND TEACHING STRATEGIES

The curriculum employs a variety of instructional methods that support the course objectives while fostering higher cognitive skills. These methods are designed to encourage and engage you in the learning process in order to maximize learning opportunities. The instructional methods include but are not limited to lectures, collaborative learning options, use of technology, and hands-on activities.

To implement the above-mentioned instructional methods, this course uses several teaching strategies, such as lessons, practice exercises and analysis. Your progress will be regularly assessed through a variety of assessment tools including project, labs, exercises, exam, and discussions.

## OUT-OF-CLASS WORK

For purposes of defining an academic credit hour for Title IV funding purposes, ITT Technical Institute considers a quarter credit hour to be the equivalent of: (a) at least 10 clock hours of classroom activities and at least 20 clock hours of outside preparation; (b) at least 20 clock hours of laboratory activities; or (c) at least 30 clock hours of externship, practicum or clinical activities. ITT Technical Institute utilizes a “time-based option” for establishing out-of-class activities which would equate to two hours of out-of-class activities for every one hour of classroom time. The procedure for determining credit hours for Title IV funding purposes is to divide the total number of classroom, laboratory, externship, practicum and clinical hours by the conversion ratios specified above. A clock hour is 50 minutes.

A credit hour is an artificial measurement of the amount of learning that can occur in a program course based on a specified amount of time spent on class activities and student preparation during the program course. In conformity with commonly accepted practice in higher education, ITT Technical Institute has institutionally established and determined that credit hours awarded for coursework in this program course (including out-of-class assignments and learning activities described in the “Course Outline” section of this syllabus) are in accordance with the time-based option for awarding academic credit described in the immediately preceding paragraph.

**ACADEMIC INTEGRITY**

All students must comply with the policies that regulate all forms of academic dishonesty or academic misconduct. For more information on the academic honesty policies, refer to the Student Handbook and the School Catalog.

**INSTRUCTOR DETAILS**

Instructor Name	
Office Hours	
Contact Details	

*(End of Syllabus)*