Course Syllabus

Casting Cost Estimating

Course Code	CEUs
4-220	1.2
Course Length (Instructional Time only) 12 hours	

Course Introduction

This Cast Metals Institute course, Casting Cost Estimating, provides participants the opportunity to gain greater in-depth knowledge and skills in cost estimates for castings. Cost estimating is a critical factor in ensuring a manufacturing company continues to acquire customers and be profitable. Cost estimates are predictions of what the company thinks it will cost to produce a product. This course examines the various cost components and methods used to arrive at an accurate estimate of the product production costs. It also provides information on common traps in casting estimates and ways to avoid these traps.

Benefits to Taking the Course

Benefits to taking this course include insights into costing methodology and cost estimating techniques. The participant will gain a better understanding of the complexities of casting production and insights into the reasons for differences between foundry estimates. The information from this workshop will help the estimator determine the cost of making a product and make more effective decisions with regards to the casting process.

Learning Outcomes

At the end of this course, participants should be able to:

1. Identify key traps in casting cost estimates and how to avoid them.
2. Assess where your organization may need to reconsider its methods for assigning costs.
3. Classify various costs by work center/department in a metalcasting facility.
4. Determine the markup and profit for a product.
5. Identify and use various standards in cost estimates.
6. Calculate yield, melt loss, volume, mass, and total weight for a casting.
7. Enter and use data in a cost estimate spreadsheet to complete a quote.
8. Calculate the break-even point for a casting.
9. Discuss the benefits of activity-based costing methods.
10. Offer justification for the analysis and implementation of an activity-based costing strategy for your organization.
11. Apply concepts and methods of a cost estimating model to your own cost estimating projects.
12. Identify reasons to evaluate and follow up on an estimate.

Lesson Outline

Module 1: Introduction

Module 2: Traps in the costing of castings

- What is a cost trap?
- Assessing your current cost methods
- How to avoid costing traps

Module 3: Cost components

- Cost structures
- Markup and profit

Module 4: Using standards in estimating

- What is a standard and why is it important?
- The role of industrial engineering in estimating
- Labor standards
- Using standards in estimating
- Weight estimating techniques

Module 5: Cost estimate model

- Overview of cost estimate models
- Using the cost model

Module 6: Break-even analysis

- What is a break-even analysis?
- Break-even formulas

Module 7: Activity-based costing method

- What is activity-based costing?
- Cost drivers: comparing ABC to traditional cost accounting methods
- Uses of activity-based costing

Module 8: Cost estimating application

- Applying the cost model to your own casting project

Module 9: Closing the loop in the estimating process

- Closing the loop

Module 10: Conclusion

Instructional Methods:

- Facilitator led discussion
- Self-assessment tool
- Individual and group exercises
- Case study
- Examples/demonstration
- Individual application exercise
- Polling

Assessment Methods:

No formal assessment will take place in this course; however, attendees will participate in informal activities such as knowledge check, application exercises, Q&A sessions, case study applications and application to their own projects with the facilitator to verify that learning outcomes are being met. Assessment of successful achievement of learning outcomes are included throughout the course to meet the ANSI/IACET 1-2013 standards for continuing education programs and for CEUs to be awarded.

Course Prerequisites, if any:

There are no prerequisites for this course.

Recommended pre-requisite knowledge:

- Basic math
- General estimating process

Resources provided in class:

- Spreadsheet assessment tool
- Geometric shape and volume formulae reference tool

Attendee Requirements to Earn CEUs:

1. Present at least 11 hours of the total 12 hours of instructional time (90%), which does not include meals or breaks.

2. Active participation (can include asking questions, communicating with other attendees during and taking part in group activities, providing responses during whole class or group discussions).
3. Successful achievement of learning outcomes.

Who Should Attend?

The target audience for this course consists of individuals responsible for:

- Administration and management
- Casting buying and designing
- Cost estimating
- Finance and accounting
- Industrial engineering
- Procurement
- Sales and marketing