#### Management Department

**Higher School of Economics**

**Nizhniy Novgorod, Russia**

#### Course Outline

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| ***Lean Accounting: From Standard Costing To Target Costing*** |

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**Master Program in Management, 2014/15 Academic Year, module 1 1.09.2014-29.10.2014**

**Course Summary**

This is a 2 year Master Program “Lean - Management” course, 3 ECTS (credits) and 4 hours per week.

Course Prerequisites: Financial Accounting, Management Accounting, Lean – Management, Economics and Accounting in the Lean Management.

Course Layout: the course will consist of lectures and workshops, also case studies, home work writing and presentations on projects will be included in the course.

**New to This Course and Added Value for Students**

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| Once the initial success of the lean management has been achieved, most companies begin to realize that there is a lot more to lean thinking than just a few changes on the shop floor.  New Lean accounting is required to support value stream management. This innovative accounting system should be simple to use, provides excellent and timely management information and eliminates wasting time and resources that are needed for the old complex cost accounting systems.  The goal of the course is to give students an understanding of integral role accounting systems in lean managerial decision making and how traditional accounting systems will change in the future to fit new challengers.  Emphasizing Key Success Factors: Cost and efficiency, Quality, Time, Innovation and Continuous Improvement, this course focuses on lean thinking and the optimum decision-making process. Target Costing, Inventory Management, Just-in-Time, Simplified Costing Methods and Time Driven Activity Based Costing are included to improve lean management emphasis of this course.  This course is supported by last editions of books, that haven’t translated into Russian yet. Recommended books for basic reading widely spread in Europeans and American Universities. Therefore, this course is useful for English-speaking students from different countries. The using of Lean accounting in the process is highlighted in the examples different levels of difficulty, including professional Certified Management Accountant (CMA) adapted tests.  This course is useful for English-speaking students from different countries. |

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| **Topics Covered** | **Hours** |
| **Topic 1. The Accounting’s Role in the Lean Management** | 2 |
| **Topic 2. Determining How Costs Behave, Learning Curves** | 4 |
| **Topic 3. Decision Making and Relevant Information in the Lean Management** | 4 |
| **Topic 4. Target Costing and Life Cycle Costing** | 8 |
| **Topic 5. Balanced Scorecard: Quality, Time, and the Theory of Constraints** | 8 |
| **Topic 6. Inventory Management, Just-in-Time, and Simplified Costing Methods** | 8 |
| **Topic 7. Time-Driven Activity-Based Costing** | 6 |
| **Total** | 40 |

**Outline of Overall** **Course Structure**

**Topic 1. The Accounting’s Role in the Lean Management**

**Learning Objectives:**

1. How Standard Costing Can Drive Wrong Behavior
2. The Better Way To Understand Product Costs.
3. How To Maintain the Accounting function while spending as little as possible.
4. Better Ways Of Making Decisions.
5. How to Focus Business Around Customer Value and Social, Nature friendly Economy.

**Notes:** The accounting department is the back office heart of a business. It takes in information from throughout the company and uses it to bring in cash from customers and pay out cash to suppliers and employees. Though it is an essential organ of a business, it tends to attract little notice from an operational perspective. Nonetheless, there are massive differences been the efficiency and effectiveness of average accounting departments and that those that operate at a world-class level. The key difference is having a lean focus on how the operation is constructed and operated.

**Topic 2. Determining How Costs Behave, Learning Curves**

**Learning Objectives:**

1. Describe linear cost functions and three common ways in which they behave.
2. Explain the importance of causality in estimating cost functions.
3. Understand various methods of cost estimation.
4. Explain nonlinear cost functions, in particular, those arising from learning curve effects.
5. Be aware of data problems encountered in estimating cost functions.

**Notes:** Topic 2 discussed cost-volume-profit analysis and the relationship among costs, profits, and activity levels. This chapter presents concepts and methods that can be utilized to analyze mixed costs and to break them into separate fixed and variable components. Managers’ use cost functions to gain a better understanding of cost behavior. **Cost functions** are mathematical formulas that describe how costs behave relative to changes in activity levels.

**Topic 3. Decision Making and Relevant Information in the Lean Management**

**Learning Objectives:**

1. Use the five-step decision-making process to make decisions.
2. Distinguish relevant from irrelevant information in decision situations.
3. Explain the opportunity-cost concept and why it is used in decision making.
4. Know how to choose which products to produce when there are capacity constraints.
5. Discuss factors managers must consider when adding or dropping customers or segments.
6. Explain why book value of equipment is irrelevant in equipment-replacement decisions.
7. Explain how conflicts can arise between the decision model used by a manager and the performance-evaluation model used to evaluate the manager.

**Notes:** Topic 5 discusses the decision-making process and the concept of relevant information. This topic continues the emphasis on the five-step decision process, applying it to relevant cost decisions relating to special order, outsourcing, capacity constraints, and equipment-replacement scenarios.

**Topic 4. Target Costing and Life Cycle Costing**

**Learning Objectives:**

1. Price products using the target-costing approach.
2. Apply the concepts of cost incurrence and locked-in costs.
3. Price products using the cost-plus approach versus target costing.
4. Use life-cycle budgeting and costing when making pricing decisions.

**Notes:** This topic describes the relationship between pricing decisions and product costing. Three major influences on pricing decisions are customers, competitors, and costs. The time horizon of the pricing decision needs to be considered as there are different factors in play for short-term versus long-term pricing decisions.

**Topic 5. Balanced Scorecard: Quality, Time, and the Theory of Constraints**

**Learning Objectives:**

1. Explain the four cost categories in a costs-of-quality program.
2. Develop nonfinancial methods and measures to improve quality.
3. Combine financial and nonfinancial measures to make decisions and evaluate quality performance.
4. Describe customer response time and explain why delays happen and their costs.
5. Explain how to manage bottlenecks.

**Notes:** This topic looks at the balanced scorecard with particular reference to quality and time factors. Quality can be design quality or conformance quality. Quality costs are usually categorized as appraisal, inspection, internal failure, and external failure. A quality program will incur costs in the first two categories, with the expectation that failure costs will decrease. Several measures designed to detect quality problems are presented. The topic also examines time as a competitive tool, focusing on customer-response time and on-time delivery as time-related factors. The Theory of Constraints is discussed, along with the related concept of bottlenecks and how to overcome them.

**Topic 6. Inventory Management, Just-in-Time, and Simplified Costing Methods**

**Learning Objectives:**

1. Balance ordering costs with carrying costs using the economic-order-quantity (EOQ) decision model.
2. Identify the effects of errors that can arise between the EOQ decision model and ways to reduce conflicts between the EOQ model and models used for performance evaluation.
3. Describe why companies are using just-in-time purchasing.
4. Identify the features and benefits of a just-in-time production system.
5. Describe different ways backflush costing can simplify traditional inventory-costing systems.
6. Understand the principles of lean accounting and throughput costing.

**Notes:** This topic presents inventory management and accounting for the costs of inventory. Six categories of costs associated with inventories are: purchasing costs, ordering costs, carrying costs, stockout costs, quality costs, and shrinkage. Just-in-time inventory and production systems are discussed, as this approach to manufacturing and inventory management is moving more and more into the mainstream. With the reduction or elimination of many inventories, a simplified cost accounting system has become possible. Backflush costing and lean accounting are presented as two possible simplified systems.

**Topic 7. Time-Driven Activity-Based Costing**

**Learning Objectives:**

1. Explain of how to build a TDABC model as well as extensions of the approach to new applications.
2. Explore the principal innovation in TDABC, showing how the model estimates demands for resource capacity, principally time, by transactions and other cost objects.
3. Describe how to calculate capacity cost rates, the second component in a TDABC model.
4. Discuss the project and implementation steps typically used to build a TDABC model in practice.

**Notes:** This Topic introduces TDABC for continuous improvement projects. Time-driven activity-based costing complements important initiatives in business process improvement, such as lean management, supply-chain optimization, and benchmarking. These applications represent significant potential extensions to the traditional process-costing, product- and customer-profitability management, and budgeting roles for TDABC models. TDABC will monetize lean projects by determining, for example, the most efficient means of processing orders.

**Assessment output**

* Final assessment — exam (test)
* Grading requirements — 50% - Final test, 50% - project (homework).

**QUIZ (pattern)**

What is Target Costing?

1. Which of the following is **not** an objective of target costing?

1. To understand and quantify the value created for the customer.
2. To determine the maximum value stream costs given the value created for the customer and the company’s expectations for value stream profitability.
3. To create a practical, cross-functional plan to increase value created for the customer while achieving the desired value stream profitability.
4. To calculate the standard cost of products and services.

2. In target costing, the value of the product or service to the customer …

1. is measured by the current value stream average cost.
2. is measured by the current value stream average cost, plus a markup to cover profit.
3. is determined after the target cost has been computed.
4. is used to establish the selling price.

3. The selling price per unit less the required return on sales (as determined by the company’s business plan) for a value stream is the …

1. allowable cost per unit.
2. benchmark cost per unit.
3. standard cost per unit.
4. average cost per unit.

4. In target costing, the cost gap is the difference between …

1. the average value stream cost and the benchmark cost of the best competitor.
2. the average value stream cost and the allowable cost per unit.
3. the standard cost per unit and the allowable cost per unit.
4. the average value stream cost per unit and the target selling price per unit.

5. Target costing is used ...

1. when introducing new value streams or introducing new products in existing value streams, and with currently existing products
2. for new products only, because product and process design must be created together.
3. with existing products only, because there is no market history for new products.
4. with new products and with currently existing products if they are being introduced into new markets.

6. Which of the following is **not** a part of the understanding customer needs phase (first phase) of the target costing process?

1. Identifying the customers whose needs must be satisfied.
2. Matching customer needs to the product or service features and characteristics.
3. Calculating the cost gap.
4. Assessing the current level of customer satisfaction.

7. \_\_\_\_\_\_\_\_ is a product feature that does not cause customer dissatisfaction when missing, but that delights the customer when it is made available because it satisfies a latent need.

1. A latent feature.
2. A basic feature.
3. A performance feature.
4. An excitement feature.

8. \_\_\_\_\_\_\_\_ is a product feature that is expected by the customer. All competitors offer the feature because if the feature is missing the customer will not even consider the product.

1. An expected feature.
2. A basic feature.
3. A performance feature.
4. An excitement feature.

9. \_\_\_\_\_\_\_\_ is a product feature whose presence or higher level of presence increases customer value and whose absence or lower level of presence reduces customer value.

1. A latent feature.
2. A basic feature.
3. A performance feature.
4. An excitement feature.

10. The relative importance of a product or service feature in satisfying overall customer needs is measured by the ...

1. customer satisfaction index.
2. customer value weight.
3. cost value ratio.
4. customer need index.

11. Festival Seating makes portable chairs designed for outdoor concerts and other events that lack fixed seating. They identified six customer needs. The needs were rated for their importance to the customer on a five-point scale (1 = low, 5 = high). The sum on the importance ratings for the six customer needs was 20. One of the most important customer needs, portability, was rated 5 in importance. Features were given ratings of 1, 3, or 5 based on their importance (low moderate, or high) to satisfying a customer need. The “weight” feature was rated highly important in providing portability, but it did not contribute to satisfying any of the other customer needs. If the sum of all the value weighted contributions to customer needs was 12, the customer value weight for the feature “weight” would be ...

1. 2.08%
2. 10.42%
3. 12.00%
4. 20.00%

12. The feature of a product that has the highest customer value weight is ...

1. the feature that contributes to satisfying the greatest number of customer needs.
2. the feature that has the highest association with the highest rated customer need.
3. the feature that creates the most overall value for customers.
4. the feature that costs the most to produce.

13. Festival Seating, a maker of portable chairs, rated customer needs on a five-point scale (1 = low, 5 = high) for their importance to the customer. Using the same scale, they also rated customer satisfaction with Festival Seating’s current product, customer satisfaction with the best available product from competitors, and the perception among Festival Seating’s managers of the importance of each customer need. Customers ranked “ease of setup and storage” 3 in importance, a 4 in satisfaction with Festival Seating’s chair and a 2 in satisfaction with the best product from competitors. Festival Seating’s managers rated “ease of setup and storage” 5 in importance. Which of the following is a valid conclusion to draw from the ratings?

1. Festival Seating’s managers have been underestimating the importance customers place on ease of setup and storage.
2. Customers think ease of setup and storage is less important than it really is.
3. Although there is still room for improvement, ease of setup and storage is a current competitive advantage for Festival Seating.
4. Compared to the competition, Festival Seating’s current chair does not satisfy customers on “ease of setup and storage, but this need is not very important to customers.

14. Which of the following is **not** a part of the understanding customer value phase (second phase) of the target costing process?

1. specifying customer needs in precise terms that can be addressed by product or service specifications.
2. determining how the needs as satisfied by the planned product or service specifications translate into customer value.
3. calculating target costs for the product (or service) and for major components.
4. evaluating and comparing the value created by product features with the cost of providing the product features.

15. After conducting research with customers and evaluating competitor’s products, Festival Seating translated the customer need “sturdy construction” as holding 140 kilograms for repeated uses without bending, breaking, or collapsing. This is an example of ....

1. Assessing the current level of customer satisfaction.
2. Matching customer needs to product and process features.
3. Specifying customer needs in precise terms.
4. Determining how needs as satisfied by planned product specifications translate to customer value.

16. A company should determine the value of an improved product or service by finding the best alternative currently available in the market and ...

1. adding (deducting) estimated value where the improved product will (will fail to) better satisfy customer needs.
2. adding the cost of providing improvements that better satisfy customer needs.
3. adding the cost of providing improvements that better satisfy customer needs, plus a markup to cover the target profit.
4. accepting that as the target price.

17. A tool to assess that can be used to help assess the cost of creating the features that create customer value is a matrix that shows the correlation between ...

1. customer needs and product features.
2. value stream processes and labor costs.
3. customer needs and customer satisfaction.
4. product features and value stream processes.

18. Festival Seating, a maker of portable chairs, created a matrix showing the correlation between product features and value stream processes. One process, Quality Assurance, was judged to have a medium contribution (value weighting 3) to durability and quality, but no impact on any other value creating product features. The customer value rating (weight) for durability was 8% and for quality was 12%. If the customer value apportioned to all Festival Seating’s processes summed to 10, what is the equivalent percentage for the Quality Assurance process?

1. 2.00%
2. 6.00%
3. 20.00%
4. 60.00%

19. Which of the following is **not** a part of the calculating target costs phase (third phase) of the target costing process?

1. analyze the existing cost by process.
2. calculate target costs for the product (or service).
3. calculate the cost for major components.
4. evaluating and comparing the value created by product features with the cost of providing the product features.

20. Festival Seating calculated the value of their new portable chair to be $16.00. Due to the availability of many competing but inferior chairs priced at $10.00, their marketing team believes they should price their chair at $13.00. The current average cost in the portable chair value stream is $9.50 per chair. If the required return on sales for the Portable Chair value stream is 40%, what is the target cost per chair?

1. $13.30
2. $ 9.60
3. $ 7.80
4. $ 6.00

21. Required profit margins (return on sales) should be set for …

1. the corporation and applied to all products or services produced.
2. each individual product or service.
3. each value stream.
4. each process.

22. Festival Seating calculated the value of their new portable chair to be $16.00. Due to the availability of many competing but inferior chairs priced at $10.00, their marketing team believes they should price their chair at $13.00. The current average cost in the portable chair value stream is $9.50 per chair. If the required return on sales for the Portable Chair value stream is 40%, what is the average cost gap per chair?

1. $ 3.50
2. $ 1.70
3. $ 0.40

23. Which of the following is **not** a part of the drive to customer value phase (fourth phase) of the target costing process?

1. identify product improvement targets.
2. identify process improvement targets.
3. calculate target costs for the product (or service) and for major components.
4. develop a value-to-cost strategy.

24. Festival Seating examined their process costs along with their matrix showing the correlation between product features and value stream processes and identified high cost processes that were adding very little customer value. If Festival Seating applies the generic cost-value strategies, they would …

1. emphasize the features produced by these processes to make them more valuable.
2. create a marketing plan to convince customers these features have great value.
3. eliminate the features and the related process steps that make the process costly.
4. try to eliminate waste in the process while retaining all the features.

25. Specialty Glass has a Medical Containers value stream. The Medical Containers value stream is trying to reduce the cost gap for redesigned liquid prescription bottles. An improvement in the glass coloring process is expected to reduce the overall process cost in the value stream by $70,000. Apportioning the cost savings among all the products in the value stream, $30,000 of the glass coloring process savings would apply to the liquid prescription bottles. Specialty Glass’s other value streams can adopt the glass coloring process improvement and save $180,000. How much of the cost savings should be counted toward closing the cost gap and meeting the target cost for the liquid prescription bottles?

1. $0, process improvements do not count toward reducing product cost gaps.
2. $30,000, the portion of the savings that can reasonably be attributed to liquid prescription bottle production.
3. $70,000, the overall value stream savings helps meet the target return for the value stream.
4. $250,000, the idea for the process savings came from the liquid prescription bottle improvement process, so that value stream should receive all the credit.

**Basic Reading**

Brian Maskel, Bruce Baggaley, Larry Grasso. Practical Lean Accounting A Proven System for Measuring and Managing the Lean Enterprise, 2/E, CRC Press Taylor & Francis Group. © 2011 by Brian Maskell and Bruce Baggaley

**Supplementary Reading**

1. Bragg, Steven (2012-03-31). The Lean Accounting Guidebook . AccountingTools. Kindle Edition.
2. Financial & Managerial Accounting: International Edition, 3/E Charles T. Horngren, Walter T. Harrison Jr., M. Suzanne Oliver. © 2011 by Prentice-Hall, Inc.
3. Robert S. Kaplan. Time-Driven Activity-Based Costing: A Simpler and More Powerful Path to Higher Profits. Kindle Edition.
4. Маскелл Б., Багтали Б. Практика бережливого учета: управленческий, финансовый учет и система отчетности на бережливых предприятиях. / Пер. с англ. — М.: Институт комплексных стратегических исследований, 2010. – 384 с.
5. Соломон Д.М. Учет по системе Лин. Как согласовать работу финансовой службы и производства / Джерольд М. Соломон; Пер. с англ. - М.: «Вершина», 2007. - 256 с.

**Internet links**

<http://www.bettermanagement.com>

www.apics.org

www.manufacturing.net

<http://www.leanaccountingsummit.com>

**Supplementary Materials and Equipment**

**PowerPoints presentation and LCD projector** are useful Supplementary Materials and Equipment in class.

This equipment allows instructors to offer a more interactive presentation that uses colorful graphics, voutlines of chapter material, additional examples, video and graphical explanations of difficult topics. Some slides also have hid den spreadsheets that will allow instructors to do what-if analyses for the situation being discussed in the slide. Students may print out of all of the slides along with additional space for taking notes.

**Topic 6. PowerPoints slides (pattern)**



