240EO032 - Management and Cost Control

Coordinating unit: 240 - ETSEIB - Barcelona School of Industrial Engineering
Teaching unit: 732 - OE - Department of Management
Academic year: 2017
Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Teaching unit Compulsory) MASTER'S DEGREE IN SUPPLY CHAINS, TRANSPORT AND MOBILITY (Syllabus 2014). (Teaching unit Optional)
ECTS credits: 4,5  Teaching languages: Spanish

Teaching staff
Coordinator: Carme Martínez Costa
Others: Victor Romera Cruz
Montse Gimeno Griñó

Degree competences to which the subject contributes

Specific:
1. Apply theories and principles inherent in the financial area in order to analyze complex situations and uncertainty, and make decisions using engineering tools.
2. Develop and implement sustainable and socially responsible solutions.
3. Identify, analyze, diagnose, design and implement solutions in complex socio-technical systems.

Teaching methodology
- Master theory classes (MD2): Explanation in class with the help of slides. The theory explanations are matched with practical cases and examples of a real company exposed by the Professor or required, in an oral way, to the students
- Practices in class (MD5): The practical sessions will foster the work with the knowledge achieved in the theory classes, deepening in the aspects related to the calculation of costs. The students will have to solve cases proposed by the Professor and will have to bring all the necessary material (notes, calculator...). The solution to the case is set in the same class and the most interesting aspects are discussed, in order to obtain a more general view than the particular view of the case exposed
- Autonomous work (individual practices to be delivered) (MD3): So as to guarantee that the acquired knowledge is consolidated individually, as well as favouring a continuous evaluation where cases to be solved will be set and will have to be handed in individually. The resolution process of the cases set as well as their final resolution will be provided by the Professor
- Teamwork (MD4): During the course, the students will design a cost system coursework for a company. Each group, from a company which he/she proposes, applies the different concepts worked in class during the course so as to end up designing a system of costs for activities which allows to calculate, objectively, the cost of their products and services. By the end of the course, the coursework must be exposed to the rest of the class

Learning objectives of the subject

Understand the most important problems of business management and industrial material costs.
Understand operation, methodology and tools of management control. Learn to make a critical analysis of the traditional cost systems and learn new management approaches and current trends of costing and management control.

Specific objectives:
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1) Understand the mechanisms and limitations of traditional Full-Cost and Direct-Cost systems.

2) Understand the methodological aspects and contributions which has led to the emergence of systems costs based activities in the field of management.

3) Know the national and international regulations that establish the criteria and procedures to calculate the cost of products and services in companies.

4) Classify costs according to different criteria referred to internal accounting.

5) Master the problems of classification, quantification and assignation of resources that make up the cost of products and services.

6) Study the necessary concepts to implement cost systems based on industrial and/or productive process in the organizations.

7) Analyse the problem of assignation and the need to seek for a baseline, in a transparent way, to identify factors with products.

8) Analyse and interpret the internal accounting information reporting and transmitting it to the manager’s of the company in order to make decisions.

9) Master the techniques, procedures and systems to calculate the logical and reasonable cost of goods and services.

10) Control, supervise and organise the internal business activity design and evaluate the existing production processes, human factors, the material resources and capital goods used.

11) Design, develop and implement a cost accounting system that allows decision-making situations to plan, organize resources, directing people towards goals and measure the impact on the results.

12) Introduce the students to the calculation and analysis of pre-established systems of costs.

13) Ability to analyse from a critical point of view that the information has limitations due to the subjectivity inherent in the assignation process and the difficulties that may arise when taking decisions.

**Study load**

<table>
<thead>
<tr>
<th>Total learning time: 112h 30m</th>
<th>Hours large group: 0h 0.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group: 20h 15m</td>
<td>18.00%</td>
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<tr>
<td>Hours small group: 20h 15m</td>
<td>18.00%</td>
</tr>
<tr>
<td>Guided activities: 0h</td>
<td>0.00%</td>
</tr>
<tr>
<td>Self study: 72h</td>
<td>64.00%</td>
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Content

1. THE BUSINESS STRATEGY AND THE MANAGEMENT ACCOUNTING

<table>
<thead>
<tr>
<th>Description:</th>
<th>Learning time: 7h</th>
</tr>
</thead>
<tbody>
<tr>
<td>The productive activity of the company</td>
<td>Theory classes: 1h</td>
</tr>
<tr>
<td>Evolution of the cost accounting</td>
<td>Practical classes: 2h</td>
</tr>
<tr>
<td>The current situations and prospects of the cost accounting</td>
<td>Self study: 4h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related activities:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Master classes, practices, questionnaires, pre-project and final exam</td>
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</table>

2. CRITICAL ANALYSIS OF THE TRADITIONAL COST SYSTEMS

<table>
<thead>
<tr>
<th>Description:</th>
<th>Learning time: 42h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept of cost, typology and expense</td>
<td>Theory classes: 9h</td>
</tr>
<tr>
<td>Classification of costs.</td>
<td>Practical classes: 8h</td>
</tr>
<tr>
<td>Correspondence of the costs and revenues. The internal result.</td>
<td>Self study: 25h</td>
</tr>
<tr>
<td>Primary and secondary distribution. Treatment of the main sections, auxiliaries and non-operative.</td>
<td></td>
</tr>
<tr>
<td>Introduction to the models and structures of costs and results.</td>
<td></td>
</tr>
<tr>
<td>The FULL-COST system. Methodology. Limitations of the model.</td>
<td></td>
</tr>
<tr>
<td>The DIRECT-COST system. Methodology. The Direct-cost and the decision making. Limitations of the model</td>
<td></td>
</tr>
<tr>
<td>Specific problems of the calculation of costs: Concept of rational imputation, joint production, running production</td>
<td></td>
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<table>
<thead>
<tr>
<th>Related activities:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Master classes, practices, questionnaires, pre-project and final exam</td>
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3. NEW TRENDS IN THE MANAGEMENT ACCOUNTING

<table>
<thead>
<tr>
<th>Description:</th>
<th>Learning time: 31h 30m</th>
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</thead>
<tbody>
<tr>
<td>The ABC model of costs. Methodology. innovative aspects in the strategic management. Practical case</td>
<td>Theory classes: 2h 30m</td>
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</table>

<table>
<thead>
<tr>
<th>Related activities:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Master classes, practices, questionnaires, pre-project and final exam</td>
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</tbody>
</table>
## 4. METHODOLOGY AND ANALYSIS IN THE BUDGETED COSTS SYSTEMS

**Learning time:** 16h  
Theory classes: 2h  
Practical classes: 4h  
Self study: 10h  

### Description:
The standard cost-system  
The limited budgets  
The flexible budgets  

### Related activities:
Master classes, practices, questionnaires, pre-project and final exam

## 5. THE MANAGEMENT ACCOUNTING

**Learning time:** 10h 30m  
Theory classes: 2h  
Practical classes: 2h 30m  
Self study: 6h  

### Description:
The distinction between Cost accounting and management accounting.  
The delimitation of management accounting under a current approach  
From the centre's accounting to the responsibility accounting. Background, centre's accounting, management centre and responsibility centre.  
The cost accounting with the management accounting criteria  

### Related activities:
Master classes, practices, questionnaires, pre-project and final exam

## 6. PRACTICAL CASES

**Learning time:** 6h  
Theory classes: 4h  
Self study: 2h  

### Description:
Explanation of different real cases about the control and management of the costs and how companies must adapt to the changes marked by the environment  

### Related activities:
Master classes, practices, questionnaires, pre-project and final exam
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<table>
<thead>
<tr>
<th>Learning time: 1h 52m</th>
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<tbody>
<tr>
<td>Practical classes: 0h 20m</td>
</tr>
<tr>
<td>Laboratory classes: 0h 20m</td>
</tr>
<tr>
<td>Self study: 1h 12m</td>
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### Planning of activities

<table>
<thead>
<tr>
<th>1. PRACTICE. CLASSIFICATION OF COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Study of the classification of costs and discussion in class about the limits of this classification</td>
</tr>
<tr>
<td><strong>Support materials:</strong> Book of practices</td>
</tr>
<tr>
<td><strong>Descriptions of the assignments due and their relation to the assessment:</strong> This practice is carried out in class and it does not have to be handed in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. PRACTICE. APPLICATION OF THE ORGANIC AND INORGANIC COST MODELS AND BASIC CALCULATIONS OF COSTS</th>
</tr>
</thead>
</table>
| **Description:** Application of these two cost models  
At the same time, the valuation of the warehouses and types of costs will be introduced |
| **Support materials:** Book of practices |
| **Descriptions of the assignments due and their relation to the assessment:** This practice is carried out in class and does not have to be handed in |

<table>
<thead>
<tr>
<th>3. PRACTICE. COMPARISON OF THE FC AND DC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Application of the two models in different cases and analysis and comparison of the results obtained</td>
</tr>
<tr>
<td><strong>Support materials:</strong> Book of practices</td>
</tr>
<tr>
<td><strong>Descriptions of the assignments due and their relation to the assessment:</strong> This practice is carried out in class and does not have to be handed in</td>
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</tbody>
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<thead>
<tr>
<th>4. PRACTICE. APPLICATION OF THE FC AND DC MODELS WITH DIFFERENT ISSUES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Application of the models and issues as the current production, joint production and others</td>
</tr>
<tr>
<td><strong>Support materials:</strong> Book of practices</td>
</tr>
<tr>
<td><strong>Descriptions of the assignments due and their relation to the assessment:</strong> This practice is carried out in class and does not have to be handed in</td>
</tr>
</tbody>
</table>

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<tr>
<th>5. PRACTICE. DECISION MAKING</th>
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</table>

Description:
Application of real cases of how the calculation of costs can help to make strategic decisions in a company

Support materials:
Book of practices

Descriptions of the assignments due and their relation to the assessment:
This practice is carried out in class and does not have to be handed in

6. PRACTICE. APPLICATION OF THE FC AND DC WITH SPECIFIC ISSUES

Description:
Application about a specific issue system of costs as reciprocal performance, subactivities, current production...

Support materials:
Book of practices

Descriptions of the assignments due and their relation to the assessment:
This practice is carried out in class and does not have to be handed in

7. PRACTICE. APPLICATION OF THE ABC SYSTEM

Description:
Application of different real cases of the cost system based on the activities

Support materials:
Book of practices

Descriptions of the assignments due and their relation to the assessment:
This practice is carried out in class and does not have to be handed in

8. PRACTICE. STANDARD COSTS AND BUDGETS

Description:
Application of the management and control accounting of real cases. Calculation of the interpretation of deviations and measures to be taken

Support materials:
Book of practices

Descriptions of the assignments due and their relation to the assessment:
This practice is carried out in class and does not have to be handed in

9. MASTER CLASSES. PRESENTATION AND INTRODUCTION

Description:
Explanation of the organization of the course and introduction to the units. Differences between FC and DC. Examples and solution to easy cases.
## Support materials:
- Slides of the course

### 10. MASTER CLASSES. TYPES OF COSTS, ORGANIC AND INORGANIC MODELS

**Description:**
- Classification of costs, correspondence of costs with revenues. The internal result. Primary and secondary distribution. Treatment of main, auxiliar and non-operating sections. Introduction to models and structures of costs and results

### 11. MASTER CLASSES. FULL COST AND DIRECT COST MODELS

**Description:**
- The FULL-COST system. Methodology. Limitations of the model
- The DIRECT-COST system. Methodology. The Direct cost and decision making. Limitations of the model
- Specific problems of the cost calculation: concept of rational imputation, joint production, current production...

### 12. MASTER CLASSES. ABC MODELS

**Description:**
- The ABC model of costs. Methodology. Innovative aspects in the strategic management. Practical calculation case

### 13. MASTER CLASSES. STANDARD COSTS AND LIMITED AND FLEXIBLE BUDGETS

**Description:**
- Analysis of the standard cost systems, limited and flexible budgets. Explanation and discussion about the calculation and interpretations of the deviations of this model

### 14. MASTER CLASSES. EXPLANATION OF THE PRACTICAL CASES

**Description:**
- Explanation of the real cases of companies and adaptation to the business model of these companies using the control and management cost systems explained in this course
Support materials:
Slides of the course and different articles

**15. QUESTIONNAIRE 1. ON-LINE QUESTIONNAIRE VIA ATENEA.**

Description:
Test questions about a specific case which the student will have to solve individually. At the same time questions will be done about the theory explained until the moment and of all the practices done in the course

Support materials:
Slides and practices carried out in class

Descriptions of the assignments due and their relation to the assessment:
By Atenea the day and hour set

**16. QUESTIONNAIRE 2. ON-LINE QUESTIONNAIRE VIA ATENEA**

Description:
Test type questions about a specific case which the student will have to solve individually. At the same time, questions about the theory explained until the moment and of all the practices done in the course will be done

Support materials:
Slides and practices carried out in class

Descriptions of the assignments due and their relation to the assessment:
By Atenea the day and hour set

**17. PRE-PROJECT**

Description:
Put into practice the acquired knowledge in the methodology and implementation of the cost systems, by the elaboration and improvement of a cost calculation system about the basis of a real company and value qualitatively the differences between the different cost models of a real company

Support materials:
Slides and practices carried out in class

Descriptions of the assignments due and their relation to the assessment:
Regarding to the planning of the course

**18. PRESENTATION OF THE PRE-PROJECT**

Description:
Exposition of the coursework carried out, simulating the exposition to the manager's of the company of the system elaborated by the student

Support materials:
Slides, practices carried out in class and pre-project carried out by the student
19. FINAL EXAM

**Description:**
Solution of a similar practical case of the practices carried out in class and a part of theory test type with essay questions about a certain topic

**Support materials:**
Calculator

**Descriptions of the assignments due and their relation to the assessment:**
Day set by the Department of Studies

<table>
<thead>
<tr>
<th>Hours: 112h 36m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical classes: 20h 18m</td>
</tr>
<tr>
<td>Laboratory classes: 20h 18m</td>
</tr>
<tr>
<td>Self study: 72h</td>
</tr>
</tbody>
</table>

Qualification system

- Participation in the practices: 10%
- Individual Practice: 25%
- Pre-project: 30%
- Final Exam: 35%

The qualification of the reassessment exam will replace the mark of the written examination.

Students who have made the final examination and have not passed the subject, they can make the reassessment exam.

Regulations for carrying out activities

They will be communicated at the beginning of each semester.
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Bibliography

Basic:


Complementary:


