UNIVERSITAT POMPEU FABRA

Subject course plan: Operations Management

Contents

1. Description of the subject

- Subject name: **Operations Management**
- Year in the programme: **2011-2012** Term: **first**
- Degree / Study: **bachelor's degree in Business Sciences-Management**
- Subject code: **21860**
- Number of ECTS credits: **5**
- Languages of instruction: **Catalan (group 1), Spanish (group 2)**
- Lecturers: **Àlex Grasas i Pere Calviño / Víctor Sánchez**

	Group 1	**Group 2**
Theory lecturer	Àlex Grasas	Pere Calviño and Víctor Sánchez
Seminar lecturer	Pere Calviño	Víctor Sánchez

Àlex Grasas
Office 20.1E68
alex.grasas@upf.edu
Student appointment hours: Thursday from 9:30 to 10:30 or by prior appointment.
Doubts will not be dealt with by e-mail.

Pere Calviño
Office 20.299 bis
pere.calvino@upf.edu
Student appointment hours: by prior appointment

Víctor Sánchez
Office 20.299 bis
victor.sanchez@upf.edu
Student appointment hours: by prior appointment

Timetables:

	Group 1			**Group 2**		
Theory	Th-Fr: from 10.30 to 12:00			Th-Fr: from 20.00 to 21:30		
	S101	**S102**	**S103**	**S201**	**S202**	**S203**
Seminars	Mon. from 14.00 a 15:30	Weds. from 10:30 to 12:00	Mon. from 12:30 to 14:00	Tues. from 16.30 to 18:00	Weds. from 20.00 to 21:30	Tues. from 15.00 to 16:30

*No group changes permitted except when arranged through the Secretary's Office

2. Presentation of the subject

The operations area is one of the main tasks of any organization and covers the management of the creation of goods and services. These activities take place in all public and private companies. Operations management can therefore be defined as the management of the resources needed to create an organization's goods or services. The operations management area is currently facing major challenges mainly as a result of globalization, the creation of new products and services, the inclusion of new technologies and the need for integration with other areas of the company. That is why knowledge of the activities of the operations area and how it is efficiently managed is important.

The objective of this course is to provide the basic concepts, quantitative models, solutions and techniques for operations management. In class, the course looks at basic themes and discusses business applications. Various quantitative models in operations management will also be used.

3. Competences to be attained

The objective of this course is to introduce students to the various production and operations activities of businesses and institutions, and to examine the strategic and tactical decisions involved in running businesses.

General competences:

- Proficiency in computing tools and their main applications in ordinary academic work.
- A proactive attitude to ascertain the unknown, which is essential in all training processes and in all influential professional activities.
- The ability to flexibly and creatively apply the knowledge acquired and adapt it to new contexts and situations.
- Demonstration of a sufficient level of knowledge for professional work.
- Use of the appropriate information in the formulation of proposals and problem solving.
- The ability to communicate appropriately as a professional orally and in writing, and use the advantages provided by ICTs.
- Identification of the key factors in a problem.
- Application of the relevant knowledge and procedures to a range of complex situations.

Specific competences:

- The ability to identify the main functions of the operations management area.
- The ability to relate the operations area with business strategy and its relationship to other functional areas of the business, such as marketing and logistics.
- The ability to identify and plan a company's basic production activities and operations, such as product and process design, total quality, production planning and inventory management.
- The ability to use the basic analytical tools and methodologies mentioned above for planning and management in the production and operations area.

4. Contents

1. Introduction to operations management
2. Design of goods and services
3. Process analysis
4. Just-in-time and lean production systems
5. Forecasting
6. Aggregate planning
7. Inventory management
8. Quality management
9. Material requirements planning (MRP)
10. Short-term programming

5. Assessment

The subject will be assessed as follows:

- 60% final examination
    - The multiple-choice examination will contain theoretical and practical questions.
- 25% partial tests during the seminars:
    - 6 tests (one in each seminar) with the five best marks counting for 5% each.
- 15% 3 practical cases during theory classes (see calendar):
    - Report and presentation in teams (four or five people per team).

September assessment: assessment will be carried out based on two options chosen by the student:

1. **Continuing assessment option**:
    - Exactly the same as the normal assessment mentioned above (60%+25%+15%).
2. **Classic assessment option**:
    - A final exam consisting of a multiple choice test + exercises (100%).

N.B.: A minimum average mark of 5 (out of 10) and a minimum mark of 4 (out of 10) in the final examination is necessary to pass the subject.

N.B.: UPF ERASMUS students from outside Catalonia, or those who are unable to attend seminars and theory classes will be assessed in exactly same way as everyone else, without any exceptions. No justification will be accepted in the event of absence from any class.

6. Bibliography and teaching resources

Recommended bibliography:

- R. B. Chase, F. R. Jacobs and N. J. Aquilano, 2009. *Administración de Operaciones*, 12th ed, McGraw-Hill. (Spanish). Referred to as CJA.
- Correspondence between the syllabus and book chapters:
  - Topic 1: chapters 1 and 2.
  - Topic 2: chapter 4.
  - Topic 3: chapters 6, 7, 8 and 20.
  - Topic 4: chapter 12.
  - Topic 5: chapter 15.
  - Topic 6: chapter 16.
  - Topic 7: chapter 17.
  - Topic 8: chapter 9.
  - Topic 9: chapter 18.
  - Topic 10: chapter 19.

Other references for additional study:

- E. M. Goldratt, J. Cox, *La Meta*, North River Press. 1992. (Spanish).
- Heizer, J.; Render, B. *Production management. Vol. 1. Decisiones estratégicas.* 8th ed., Madrid: Prentice Hall, 2007. (Spanish).
- Heizer, J.; Render, B. *Production management. Vol. 2. Decisiones operativas.* 8th ed., Madrid: Prentice Hall, 2007. (Spanish).

7. Methodology

The teaching/learning activities are as follows:

- Face-to-face lectures in the classroom with the full group, explaining the theoretical concepts and tools and the subject methodologies.
- Face-to-face seminars. Practical exercises will take place and be discussed during the first hour of each seminar. The methodology aims to be interactive, participatory and practical. These activities require prior preparation before the seminar.
- Individual partial tests during the final half-hour of the seminar.
- Teamwork on the four practical cases covered in the theory classes. Presentation of the case by teams. Each group should bring a laptop computer for the last three cases (days: 28 October, 11 November, 1 and 2 December).
- Autonomously outside the classroom, individually or in teams. Students can learn autonomously by consulting other sources, such as the additional bibliography.

8. Subject dossier

The support material for the subject is available in the Aula Global – Moodle and consists of:

- Slide on each topic in PDF format.
- Case studies and exercises for seminars.

- Relevant videos.

9. Activities planning

Week	Thursday	Friday	Seminar
1	Topic 1: introduction to operations management (group 1 only)	Topic 1: introduction to operations management (group 2 only)	-
2	Topic 2: design of goods and services	Topic 3: process analysis	-
3	Topic 3 (cont.)	Cas Kristen's Cookie Company (T3)	-
4	Cas Kristen's Cookie Company (T3)	Topic 4: *Just-in-time* and adjusted production systems	-
5	Topic 5: forecasting	Topic 5 (cont.) - Topic 6: aggregate planning	Seminar 1: Topic 3
6	Topic 6: (continued)	Gimondo Case (T6)	Seminar 2: Topic 5
7	Gimondo Case (T7) - Topic 7: inventory management	Topic 7: (continued)	-
8	Topic 7 (cont.)	Windobot Case (T7)	Seminar 3: Topic 6
9	Windobot Case (T7) - Topic 8: quality management	Topic 9: material requirements planning (MRP)	Seminar 4: Topic 7
10	Topic 10: short-term programming	Planned for recuperation	Seminar 5: Topic 9
11	UPF Game	UPF Game	Seminar 6: Topic 10