Universidad Francisco de Vitoria UFV Madrid

Teaching guide

IDENTIFICATION DETAILS

Degree:	Industrial and Systems Engineering
Field of Knowledge:	Engineering and Architecture
Faculty/School:	Senior Polytechnic School
Course:	ORGANIZATION OF COMPANIES AND PRODUCTION MANAGEMENT
Type:	Compulsory
ECTS credits:	6
Year:	3
Code:	5731
Teaching period:	Fifth semester
Area:	Basic process engineering
Module:	Common to the Branch of Industrial Engineering
Teaching type:	Classroom-based
Language:	English
Total number of student study hours:	150

Teaching staff	E-mail
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SUBJECT DESCRIPTION

This subject offers to students a general view of principles and fundamentals of business management, as well as basic principles and methodologies of operations and production management.

GOAL

The main objectives of "Business and Production management" are to acquire general knowledge about business management, develop an understating on the application of this knowledge in a global competitive environment, develop business strategies as well as managerial competence skills such as critical thinking and effective communication, and to plan and manage the production systems according to the business strategy and mission.

PRIOR KNOWLEDGE

Basic knowledge of Business and Mathematics (basic Mathematics and Statistics)

COURSE SYLLABUS

- BLOCK 1: Management in Diverse, Global Environments
  - oIntroduction to Organizations
  - oTaking Risks and Making Profits within the Dynamic Business Environment
  - oUnderstanding Economics and How It Affects Business
  - oManaging the External Environment and the Organization's Culture
  - oDoing Business in Global Markets
  - oManaging Change and Disruptive Innovation
  - oManaging Social Responsibility and Ethics

- BLOCK 2: Business Management: Competencies and skills for Industrial Engineers
  - oManagement and Leadership: Roles and Responsibilities
  - oManaging Individuals and Teams
  - oManaging Marketing Resources and Activities
  - oManaging Financial Resources

- BLOCK 3: OPERATIONS MANAGEMENT
  - o Strategic and tactical decisions in operations management.
  - o Production Factory
  - o Processes and Projects
  - o Production and Productivity

- BLOQUE 4: PRODUCTION MANAGEMENT
  - o Goods and services design
  - o Processess design: Line balancing. Flows management
  - o Work Definition: Methods analysis
  - o Capacity and restrictions management: Tasks assignment
  - o Layout strategy. Working cells
  - o Logistic management. Supply Chain. Inventory management
  - o Lean Manufacturing

EDUCATION ACTIVITIES

For the development of the subject there are a combination of theoretical aspects with others related to practice and direct application. Physical presence activities prepared are, basically, theoretical-practical sessions and practical sessions.
- Theoretical-practical sessions: Exposition with audiovisual support of key concepts of the subject. These sessions will be developed in a dynamic environment, focused on the teacher-student and student-student interactions
- Practical sessions: To reinforce, use and acquire expertise on the theoretical concepts. It will be predominant the cases-based-methodology with practical exercises and projects. Collaborative and constructive teaching enviroment will be promoted by mean of student-student interaction as main axis of solving proposed problems.

The face-to-face work will be completed with an important autonomous workload without phisical presence for each student. Focusing on:

• Individual study: To reinforce and embrace concepts taught in the theoretical-practical sessions, and application methods used in the practical sessions.
• Individual work: Exercises / cases preparation and practical cases.
• Working groups: As the result of theoretical-practical sessions and team´s projects.

All study and work performed by each student will be supervised and guided by the teacher, in phisical activities and in tutorships (personal or in groups)

Finally, with the aim of facilitate access to support material and work planning, the Aula Virtual tool will be used to exchange between Teacher and students. Aula Virtual is a on-line learning platform with different e-resources and tools for teaching.

All formative and teaching activities, as well as subject schedule and planning, could be modified and adapted based on the different scenarios arranged following Health authorities instructions.

DISTRIBUTION OF WORK TIME

CLASSROOM-BASED ACTIVITY	INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY
60 hours	90 hours
Expository lessons (class) 20h Seminar 5h Working group´s presentation 10h Theoretical-practical sessions 15h Tutorships 5h Evaluation & exams 5h	Individual study and work 65h Teamwork 25h

SKILLS

Basic Skills

Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience

Students must have developed the learning skills needed to undertake further study with a high degree of independence

General Skills

Knowledge in basic and technological subjects, which enables them to learn new methods and theories, and gives them versatility to adapt to new situations

Ability to solve problems with initiative, decision making, creativity, critical reasoning and to communicate and transmit knowledge, skills and abilities in the field of Industrial Engineering

Knowledge to carry out measurements, calculations, assessments, appraisals, appraisals, studies, reports, work plans and other similar works

Specific skills

Applied knowledge of business organization

Basic knowledge of production and manufacturing systems

LEARNING RESULTS

To obtain the capability to understand, define and manage the general aspects in a business or company.

General knowledge on planning, management and organization of production within a Factory.

LEARNING APPRAISAL SYSTEM

ORDINARY EVALUATION

• Active participation (PA):
  o Score: 1/10
  o Type: individual

• Theoretical-practical activities (TP)
  o Score: 3/10
  o Type: individual and group
  o Minimum score to pass the course: 1,5/3

• Partial Knowledge Trial (PCP) Theoretical:
  o Score: 6/10
  o Type: individual
  o Minimum average score in all PCPs to pass the course: 5/10, being mandatory to obtain at least 4/10 on each PCP separately.

In the case of not having the minimum average score with all PCPs, the student will be required to repeat all of them with a score below 5/10 in the General Knowledge exam.

• Global Knowledge Exam (PCG) Theoretical-practical:

If the average of PCPs is not over 5/10, those PCPs with score below 4/10 will be repeated in the PCG. This exam will be splitted in all parts associated to each PCP (blocks). The student wil go to the exam:
  o Mandatory: to all PCPs with score below 5/10.
  o Optional: to those PCP with score over 5/10, where the student wants to improve his/her results.

The subject will be considered as pass in ordinary evaluation when the sum of all scores assigned to each block is over 5/10 and minimum scores are achieved.

Those students who where exents of phisical presence obligation ("academic dispensation") due to 2nd or more inscriptions (signing up), or ad hoc authorization, will be examined with the same kind of trials (PCP and PCG). The percentage of PA/TP will be distributed over the correspondent PCPs of the subject. The part concerning to PL will be considered as of previous inscription, whenever the score were equal or over 5/10.

EXTRAORDINARY EVALUATION:

The student will prepare those parts of the subject which were not passed (score below 5/10) except parts PA that are not recovered.

The subject will be considered as passed in extraordinary evaluation when the sum of all scores assigned to each block were equal or over 5/10 and complying with minimum scores required.

En the extraordinary evaluation, 6 points concerning PCPs will be assessed in just one exam.

Independently of which evaluation, in the case of Health instructions reccomends to return to a scenario of remote teaching, the weights of differents trials will be maintained and exams will be performed in a remote or phisical presence, following Univeristy rules.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Heizer, J.; Render, B. Dirección de la producción. Vol. 1. Decisiones estratégicas. 8ª ed. Madrid: Prentice Hall, ISBN: 978-84-832-2533-2

William Nickels; James McHugh; Susan McHugh (2018). Understanding Business (12th edition) McGraw-Hill Education. ISBN-10 : 126009233X / ISBN-13 : 978-1260092332

Chase, R. B.; Jacobs, F. R.; Aquilano, N. J. Administración de Operaciones. 12ª ed., McGraw-Hill. ISBN: 978-970-10-7027-7

Additional

Heizer, J.; Render, B. Dirección de la producción. Vol. 2. Decisiones Tácticas. 8ª ed. Madrid: Prentice Hall, ISBN: 8490352852

La máquina que cambió el mundo. James P. Womack, Daniel T.Jones ISBN-10: 8416583978

Práctica de Organización, producción y operaciones. Dopacio, Aguilera, Gómez, Masa ISBN: 978-84-9035-605-0