



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

Syllabus
2024 - 2025

TECHNICAL SHEET OF THE SUBJECT

| Data of the subject | |
|---------------------|---|
| Subject name | Operations Management |
| Subject code | E000006868 |
| Main program | Bachelor's Degree in Business Administration and Management |
| Involved programs | Grado en Administración y Dirección de Empresas (E-2) [Second year] Grado en Administración y Dirección de Empresas (E-2) [Third year] Grado en Administración y Dirección de Empresas con Mención en Internacional (E-4) [Fourth year] Grado en Administración y Dirección de Empresas (E-2) - Bilingüe en inglés [Second year] |
| Level | Reglada Grado Europeo |
| Quarter | Semestral |
| Credits | 6,0 ECTS |
| Type | Optativa (Grado) |
| Department | Departamento de Gestión Empresarial |
| Coordinator | Manuel Morales /Lucía Barcos |
| Schedule | E2 groups: two 2-hour sessions per week in the afternoons - E4 groups: Tuesdays and Thursdays 12:30-14:30 |
| Office hours | Request appointment by e-mail |
| Course overview | Knowledge and understanding of the essential factors in the process of generating goods and their transfer to customers. More specifically, production processes and their differences are studied, the management of production systems based on the type of service and product, the design of production systems, the planning of production and logistics activities, the generation of needs in the processes production, inventory management, product quality management and logistics service. Deepening in concepts about product and process design, the organization of tasks, the tools and mathematical algorithms used in the planning and programming of operations, the analysis, evaluation and quality management of the operations systems, the measurement of the performance of operations, productivity context of operations and management of supply and distribution networks. |

| Teacher Information | |
|---------------------|---|
| Teacher | |
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SPECIFIC DATA OF THE SUBJECT

Contextualization of the subject

Contribution to the professional profile of the degree

This course will help the student to acquire the management capabilities related to quality, productivity, flexibility, planning and task management.

As operations are related to many aspects of the Organization, from product design to delivery to the customer, knowledge on this domain will provide the student with a wide vision about the impact of the decisions in the value chain.

Prerequisites

Knowledge about organizations.

Competencies - Objectives

Competences

GENERALES

| | | |
|------|--|--|
| CG01 | Capacidad de análisis y síntesis | |
| | RA1 | Comprende pormenorizadamente el material bibliográfico propio de la materia |
| | RA2 | Ordena, clasifica y resume de manera lógica y coherente los contenidos del material bibliográfico propio de la materia |
| CG02 | Resolución de problemas y toma de decisiones | |



| | | |
|--------------------|--|---|
| | RA1 | Es capaz de identificar las limitaciones que afectan a la toma de decisiones y de buscar una decisión satisfactoria |
| | RA2 | Toma decisiones y resuelve problemas prácticos haciendo uso de contenidos teóricos y conforme a metodologías reconocidas de resolución de problemas |
| CG04 | Capacidad de gestionar información proveniente de fuentes diversas | |
| | RA1 | Busca y utiliza documentación de distintas fuentes, proveniente de diversas vías, para sus actividades de aprendizaje, discriminando conforme a su valor y a la utilidad de cada una de ellas |
| | RA2 | Desarrolla pensamiento crítico, cuestionando la información gestionada, generando conclusiones y puntos de vista propios |
| | RA3 | Es claro, preciso, exacto y relevante en el uso de la información, profundizando con lógica e imparcialidad |
| CG12 | Compromiso ético | |
| | RA1 | Enfoca las tareas de aprendizaje desde una actitud ética y evita el plagio de ideas y trabajos ajenos en la realización de ejercicios prácticos |
| | RA2 | Reconoce explícitamente la autoría de ideas y las fuentes empleadas en los trabajos realizados |
| CG16 | Orientación a la acción y a la calidad | |
| | RA1 | Relaciona los conocimientos con las distintas aplicaciones profesionales o prácticas |
| | RA2 | Resuelve casos prácticos que presentan una situación profesional real |
| CG17 | Capacidad de elaboración y transmisión de ideas, proyectos, informes, soluciones y problemas | |
| | RA1 | Argumentar de manera independiente y crítica sobre conceptos y teorías diversas |
| | RA2 | Conocer y aplicar diferentes teorías, modelos y herramientas en la resolución de problemas prácticos |
| ESPECÍFICAS | | |
| CEOPT01 | Conocimiento y comprensión de la planificación y dirección de las operaciones y de la gestión de proyectos | |
| | RA1 | Conoce las herramientas que se utilizan en el Diseño las operaciones para la toma de decisiones sobre la localización, los procesos, la capacidad y la calidad |
| | RA2 | Conoce los mecanismos para lograr una ventaja competitiva desde las operaciones y lograr la satisfacción de los clientes. |
| CEOPT02 | Conocimiento y comprensión de la gestión de la cadena de suministro | |
| | RA1 | Saber coordinar las actividades de proveedores y clientes dentro de la cadena de suministro, consciente de su repercusión en la eficacia y eficiencia |



| | |
|-----|---|
| RA2 | Saber cómo emplear las tecnologías de información y comunicación para la mejora de la calidad del servicio en la transferencia de productos |
| RA3 | Incorporar en la gestión la dimensión ética de la cadena de suministro |

THEMATIC BLOCKS AND CONTENTS

Contents - Thematic Blocks

Course Contents

PART 1 – STRATEGY OF OPERATIONS MANAGEMENT

Lesson 1: Operations and Productivity. Operations Strategy

Lesson 2: Project Management

Lesson 3: Forecasting

PART 2: DESIGNING OPERATIONS

Lesson 4: [Design of Goods and Services](#)

Lesson 5: [Managing Quality](#)

Lesson 6: [Location Strategies](#)

Lesson 7: [Process and Layout Strategies](#)

Lesson 8: Capacity Planning

PART 3: MANAGING OPERATIONS

Lesson 9: Inventory Management

Lesson 10: Production Planning

Lesson 11: Supply Chain Management. Sustainability and Ethics

Lesson 12: Just In Time and Lean Production Systems



TEACHING METHODOLOGY

General methodological aspects of the subject

The course follows a practical approach, focussed on the student, to promote his / her autonomy and active participation during the learning process with the aim of helping him / her to develop the necessary competences for the professional life. The following activities will be developed in order to develop the concepts and competences above mentioned:

1. **Master Classes** where the professor will present the main contents in a clear, structured and motivating manner, in general supported with audiovisual resources. Main aspects will be outlined to support the student learning process, as well as suggestions from students are encouraged and considered.
2. **Practice classes.** Where the professor explains the basic notions, with the students participations who discuss and debate some of the points or nuances in order to optimize the contents comprehension. It will include dynamic presentations and regulated or spontaneous participation of students through diverse activities.
3. **Analysis and resolution of cases** proposed by the professor, after a short reading, material prepared on purpose or any other data or information where students could apply the acquired knowledge. In general, cases will be based on real situations and problems. Teamwork will be encouraged. Business analytics techniques might be used, if required.
4. **Search for documentation and data on Web.** The main goal is that students can identify real applications of the lessons explained in class.
5. **Public presentations of specific issues or cases.** Presentation and defense of cases in front of the class and professor. It could be done individually or in teams. Aspects to be considered during evaluation: conceptual organization, knowledge of the related topic, clear exposition, respect and coherence in all phases, and, in case of a collective assignment, active collaboration of all team members.
6. **Individual study and exploring in more detail on the documentation** that the student will do to comprehend, rework and assimilate the scientific content with the goal of a practical application. Individual reading of texts and materials (books, reviews, articles, press releases, Internet documents, cases, etc.) related with the course. All materials and guides are available on the course website.
7. **Academic Tutorial** individual or in groups in order to solve problems or doubts that could have arisen during the learning process.

SUMMARY STUDENT WORKING HOURS

| CLASSROOM HOURS | | |
|---|--|---|
| Lecciones de carácter expositivo | Exposición pública de temas o trabajos | Ejercicios y resolución de casos y de problemas |
| 33.00 | 4.00 | 23.00 |
| NON-PRESENTIAL HOURS | | |
| Ejercicios y resolución de casos y de problemas | Estudio individual y/o en grupo y lectura organizada | Trabajos monográficos y de investigación, individuales o colectivos |
| 30.00 | 30.00 | 30.00 |
| ECTS CREDITS: 6,0 (150,00 hours) | | |

EVALUATION AND CRITERIA

| Evaluation activities | Evaluation criteria | Weight |
|-----------------------|---------------------|--------|
| | | |



| | | |
|--|--|----|
| Final Exam a. Exam Theory = 50% b. Exam Cases and Exercises = 50% | Capabilities: Comprehension, Relational, Exposition Reasoning Final Exam minimum qualification required= 5.00 points (from a max. of 10.00). | 50 |
| Control Tests during the semester | Classes follow up. Concept understanding | 25 |
| Group project: practice applications of competences Minimum qualification required= 5.00 points (from a max. of 10.00) A misuse or fraudulent use of generative artificial intelligence (such as ChatGPT) will be cause for sanction. See NOTE bellow | Teamwork and practice application od theory. | 15 |
| Attendance and Active Participation in class Attitude on individual work | Participation Proactivity. | 10 |

Ratings

EVALUATION IN EXTRA EXAM

Students failing the ordinary exams will have the opportunity of an extraordinary exam, whose grade will consist on:

1. Exam Theory = 50%
2. Exam Cases and Exercises = 50%

In this case, the course grade will be this exam grade.

Extra Exam minimum qualification required= 5.00 points (from a max. of 10.00).

NOTE REGARDING THE MISUSE BY STUDENTS OF GENERATIVE ARTIFICIAL INTELLIGENCE

The misuse by students of generative artificial Intelligence (such as Chat GPT) in any assessment activity will be considered a serious offense, according to the General Regulations of the University, article 168.2.e: "engaging in actions aimed at falsifying or defrauding academic performance evaluation systems." The consequences of such actions will result in "temporary expulsion of up to three months or the prohibition of taking exams in the next examination period upon imposition of the sanction, in one or several subjects in which the student is enrolled, [...] in addition to receiving a failing grade (0) in the respective subject, [...] and being prohibited from taking the exam for that subject in the following examination period."



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BIBLIOGRAPHY AND RESOURCES

Basic Bibliography

Articles and additional material Those present will be provided in class for their work in the classroom, if applicable.

Websites Portal of Resources of the Subject

Notes Provided by the teacher before the presentation of the topics.

Other materials Videos to analyze in class

Textbooks They are indicated in the Bibliography, at the end of each topic of the Notes of the Subject

Complementary Bibliography

HEIZER J.; RENDER, B., MUNSON, C. (2023). Operations Management: Sustainability and Supply Chain Management (14th Edition). Pearson

JACOBS, F.R.; , CHASE, R.B. (2021). Operations and Supply Chain Management.(16th Edition). McGraw Hill.

KRAJEWSKI, L.J.; MALHOTRA, M.K.; RITZMAN, L.P. (2018). Operations Management: Processes and Supply Chains (12th Edition). Pearson.

LEPORATI, M., MARTUL VÁZQUEZ, L., MORALES CONTRERAS, M.F. (2021). *GLOBAL SUPPLY CHAIN. An integrative View*. Ed. Thomson Reuters, Aranzadi.

GOLDRATT, E.M. & COX, J.: *The Goal: a Process of Ongoing Improvement*, North River Press.

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