COMILLAS
UNIVERSIDAD PONTIFICIA
ICAI ICADE CIHS

**Syllabus**
**2025 - 2026**

# TECHNICAL SHEET OF THE SUBJECT

## Data of the subject

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| **Subject name** | Project Management |
| **Subject code** | E000012134 |
| **Mainprogram** | Grado en Análisis de Negocios/Business Analytics |
| **Involved programs** | Grado en Administración y Dirección de Empresas y Grado en Análisis de Negocios/Business Analytics [Fifth year] |
| **Level** | Reglada Grado Europeo |
| **Quarter** | Semestral |
| **Credits** | 6,0 ECTS |
| **Type** | Optativa (Grado) |
| **Department** | Departamento de Gestión Empresarial |
| **Coordinator** | Robert James Antonides Campos |
| **Schedule** | 15:00 - 16:00 Monday and Wednesday |
| **Office hours** | Tutoring hours by appointment by email. |
| **Course overview** | The objective of the course is to provide the student with the necessary professional knowledge to effectively carry out the planning and management of projects, in accordance with the most used in the professional field. Achieving this objective implies knowing and using the methods of project management that will allow the successful achievement of the objectives of a project. At the end of the subject, the student will acquire sufficient knowledge to carry out the planning and effective monitoring of a project. |

## Teacher Information

### Teacher

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| **Name** | Robert James Antonides Campos |
| **Department** | Departamento de Gestión Empresarial |
| **Office** | Alberto Aguilera 23<br>Sala de Profesores Colaboradores Asociados |
| **EMail** | rantonides@comillas.edu |

# SPECIFIC DATA OF THE SUBJECT

## Contextualization of the subject

### Contribution to the professional profile of the degree

The main objective of the course is to provide the student with a general vision, knowledge base, key concepts and tools of project management, so that he may participate in any of the different phases of a project, being capacitated to understand and apply project management tools and approaches:

- Comprehend the context and environment.
- Understand the project life cycle.

- Develop a project charter defining objectives, scope, and the project plan including timing and milestones, resource plan, and project organizational structure.
- Develop a project schedule, configuring activities and estimating durations.
- Estimate and Develop a project budget,
- Develop a risk management plan.
- Develop a project communications plan.
- Develop a project risk management plan.
- Develop project monitoring plans and apply techniques and tools for the execution and control of a project.

At the conclusion of the course the student will be capacitated to:

- Comprehend and have an integral vision of the process for defining, planning, execution and monitoring of a complex project.
- Capabilities for developing a project plan defining objectives, scope, resources, timing, and contingency scenarios.
- Develop a project schedule.
- Conduct a stakeholder analysis of all parties impacted and impacting the project.
- Develop a communication plan.
- Develop a plan to identify and mitigate risks.
- Develop a financial plan and its related monitoring processes.
- Design a complete project monitoring system defining processes, indicators and communication mechanisms.

This course empowers the student with an overall vision and understanding of the essential concepts and tools of project management. The course provides the knowledge of the principal tools and techniques that are used in project management as well as the vocabulary and terminology that envelop the subject. The course offers technical knowledge of the different concepts and tools that are essential for the planning, management, and execution of complex projects:

PROJECT MANAGEMENT

The role undertaken by the manager of an international project; the definition of a project; project processes (project design, project launch, execution, monitoring and control, close); critical knowledge areas.

CONTEXT IN PROJECT MANAGEMENT

Definition of project phases and the project life cycle; stakeholders and other interest groups, Internal factors, organizational structures, external factors, soft skills.

PROJECT OBJECTIVES AND SCOPE MANAGEMENT.

Defining project objectives; project requirements; project scope variables (functional, geographic, product/service, quality specifications, and systems).

PROJECT PLANNING

Defining and developing the project plan; the planning process; the work breakdown schedule (WBS); the project charter; the organizational structure.

TIME MANAGEMENT

From the project work breakdown structure to the chronology of tasks and activities; defining activities and sequencing; estimating durations; time diagram; critical path analysis; defining milestones; controlling the chronology.

RESOURCES

Defining resource needs; assigning resources to activities and optimizing resources as a function of the project plan; the project team structure. The impact of cultural diversity and different labor regulations within an international environment.

COST MANAGEMENT

Estimating and managing costs; the business case; estimating costs; cost structures; learning curve analysis; budget development and monitoring.

RISK MANAGEMENT

Defining risk; types of risks; risk identification processes; defining a risk management plan and a risk management process; valuing risks; specific risk action plans.

COMMUNICATION

The role of communication; the communication plan; communication strategy; culture and communication; creating formal communication structures; efficient communication.

PURCHASING AND LOGISTICS

Logistics planning within an international environment; purchasing processes within an international environment.

MONITORIZATION Y CONTROL

Project monitoring processes; defining key process indicators (KPI´s); project dashboard; scenario analysis; decision making processes; Earned Value Management (EVM) project monitoring system; Project monitoring meetings.

The student will obtain the knowledge of proyect management from the perspective of the traditional project manangement and from the perspective of an Agile approach under the CRUM methodology.

## Prerequisites

Foundations of Management and ADE.

## Competencies - Objectives

### Competences

#### GENERALES

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| **CG01** | Capacidad de organización y planificación en la identificación de problemas en el contexto de datos masivos | |
| | **RA1** | Describe, relaciona e interpreta situaciones y planteamientos de nivel medio |
| | **RA2** | Selecciona los elementos más significativos y sus relaciones en las situaciones planteadas |

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| | **RA3** | Es capaz de enfrentarse con el estudio analítico de casos y escenarios, así como de llevar a efecto síntesis de información y de datos, empleando los conceptos adecuados. |
| **CG04** | Capacidad para elaborar proyectos e informes de manera oral y escrita, difundiendo estas ideas a través de canales digitales | |
| | **RA1** | Es capaz de buscar y analizar información procedente de fuentes diversas, haciendo un uso eficaz de las herramientas digitales |
| | **RA2** | Discierne el valor y la utilidad de diferentes fuentes y tipos de información, contrastándolas, analizándolas críticamente e incorporando valoraciones propias. |
| | **RA3** | Incorpora la información a su propio discurso, citando adecuadamente las fuentes que utiliza |
| **CG08** | Capacidad crítica y autocrítica en la sociedad de la información | |
| | **RA1** | Identifica los supuestos y las limitaciones de métodos y teorías |
| | **RA2** | Identifica, establece y contrasta hipótesis, variables y resultados de manera lógica y crítica |
| | **RA3** | Es capaz de construir un discurso propio, en un contexto de intercambio de opiniones. |
| **CG09** | Compromiso ético en la sociedad de la información | |
| | **RA1** | Persigue la excelencia en las actuaciones profesionales |
| | **RA2** | Se preocupa por las consecuencias que su actividad y su conducta pueden tener para los demás |
| | **RA3** | Incorpora en su discurso y en sus propuestas de actuaciones, las consecuencias que las mismas pueden tener para los distintos stakeholders de una organización global |
| **CG11** | Capacidad para aprender y trabajar autónomamente en la sociedad de la información | |
| | **RA1** | Es capaz de recopilar, preparar y ampliar información con carácter previo a su participación en actividades que implican la construcción de un discurso propio argumentado o la propuesta de soluciones innovadoras a un problema |
| | **RA2** | Realiza sus trabajos y su actividad necesitando sólo unas indicaciones iniciales y un seguimiento básico, poniendo en práctica las habilidades necesarias para la investigación independiente |
| | **RA3** | Busca y encuentra recursos adecuados para sostener sus actuaciones y realizar sus trabajos |
| **ESPECÍFICAS** | | |
| **CEO01** | Comprender y aplicar las herramientas, y los enfoques de la gestión de proyectos | |
| | **RA1** | Es capaz de elaborar, dirigir, coordinar y gestionar proyectos de naturaleza diversa, haciendo uso eficaz de las herramientas digitales |

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| | **RA2** | Identifica las diferencias entre la Dirección de Proyectos y la Dirección de Proyectos de Big Data |
| | **RA3** | Entiende el concepto del ciclo de vida aplicado a la gestión de proyectos |
| | **RA4** | Posee una visión global de las tareas que comprenden la disciplina de la gestión de proyectos |

## THEMATIC BLOCKS AND CONTENTS

### Contents - Thematic Blocks

CONTENTS: how to improve the alignment between projects and strategic objectives; approaches to successful program design and flexible and adaptable projects in an uncertain, unpredictable and digitized environment; project phases and the life cycle of the project; keys in the differences between project management and Big Data project management (specificities of projects; teams: missions and profiles; methodologies; operation, maintenance and monitoring; optimization techniques; main suppliers and solutions); knowledge areas in project management (PMBOK, PMCDF...); inter-functional, inter-organizational and international; scope management; decomposition into activities; management of times and deadlines; financing and management costs; portfolio management; project innovation through "design thinking"; risk management; human resource management; and communications management.

1. Introduction to International Project Management and Course Description
2. International Project Management Framework
3. Project Management Model Basics and the Project Life Cycle
4. Project Integration Management (The Project Charter and Project Management Processes
5. Objectives and Scope Management
6. Project Planning, Time and Resources
7. Budgets and Financial Monitoring
8. Risk Management and Quality Management
9. Project Team, Communication and Stakeholders
10. Logistics and Purchasing
11. Project Monitoring and Reporting
12. Project Management - Agile approach / SCRUM Methodology

## TEACHING METHODOLOGY

### General methodological aspects of the subject

#### In-class Methodology: Activities

The working method combines a flexible conception of the Master Lesson with practical sessions dedicated to the formulation and resolution of problems. In order to promote the active role of the student, problems are proposed to be solved individually or in small groups. The evaluation of these problems is used to carry out a

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| work of academic comprehension and follow-up of the student learning process.<br><br>On-site Methodology:<br><br>Activities:<br><br>1. Expository lesson: Exposition of the main concepts and procedures through explanation by the teacher, will include dynamic presentations,small practical examples and the participation of the students.<br><br>2. Group debates, tests and resolution of exercises: In these sessions, they will solve the doubts arising from the readings and activities carried out by the students and the topics or contents proposed by the teacher.<br><br>3. Practices. Throughout the course the students will carry out individual practices (exercises) of each one of the subjects exposed previously in the classroom. After each theoretical class, one or more problems will be proposed that will have what the students do. They will simultaneously carry out a general practice throughout the course. It will be carried out in groups and in them the students will exercise the concepts and techniques studied using the software tools recommended.<br><br>4. Tutorials. They will be carried out in groups and individually to solve the doubts that arise after the students have worked on the different topics. | CG01, CG04, CG08, CG09, CG11, CEO01 |

| **Non-Presential Methodology: Activities** | |
|---|---|
| The working method combines a flexible conception of the Master Lesson with practical sessions dedicated to the formulation and resolution of problems. In order to promote the active role of the student, problems are proposed to be solved individually or in small groups. The evaluation of these problems is used to carry out a work of academic comprehension and follow-up of the student learning process.<br><br>Off-site methodology:<br><br>Activities<br><br>1. Individual study of the material to be discussed in later classes: activity carried out individually by the student when he analyzes, searches and internalizes the information provided by the subject and that will be discussed with their peers and the teacher in later classes.<br><br>2. Resolution of practical problems: the student must use and internalize the knowledge provided on the subject. The correction with the whole class will be made by one of the students or the teacher, depending on the case,<br><br>3. Group work: work groups will be formed that will have to carry out a homework outside of school hours that will require sharing of information and resources among members with a view to achieving a common goal. It will work as incremental throughout the course and partial deliveries will be made to the teacher. | CG01, CG04, CG08, CG09, CG11, CEO01 |

## SUMMARY STUDENT WORKING HOURS

| CLASSROOM HOURS | | |
|---|---|---|
| Lecciones de Carácter expositivo | Ejercicios y resolución de casos y de problemas | Exposición pública de temas o trabajos |

| | | | |
|---|---|---|---|
| 30.00 | 22.00 | 8.00 | |
| **NON-PRESENTIAL HOURS** | | | |
| Ejercicios y resolución de casos y de problemas | Sesiones tutoriales | Estudios individual y/o en grupo, y lectura organizada | Trabajos monográficos y de investigación, individuales o colectivos |
| 25.00 | 5.00 | 30.00 | 30.00 |
| **ECTS CREDITS: 6,0 (150,00 hours)** | | | |

## EVALUATION AND CRITERIA

The use of AI to produce full assignments or substantial parts thereof, without proper citation of the source or tool used, or without explicit permission in the assignment instructions, will be considered plagiarism and therefore subject to the University's General Regulations.

| Evaluation activities | Evaluation criteria | Weight |
|---|---|---|
| Final Exam | - Understanding of concepts. - Application of the concepts for the resolution of theoretical questions and problems. - Analysis and interpretation of the results obtained in resolution from problems. - Presentation and written communication. | 40 |
| Individual Work | - Comprehension of concepts. - Application of concepts for Problem resolution. - Analysis and interpretation of the results obtained in resolution of problems. | 25 |
| Group Work | - Understanding of concepts. - Application of knowledge to Planning and project management on a practical case, to be carried out incrementally, through installments periodic. - Presentation and writing | 20 |
| Class Participation | Qualitive aspect of class participation. | 15 |

### Ratings

Class attendance is mandatory. According to the general rule of the University, the unjustified non attendance of 15% of teaching hours eliminates the possibility of passing the subject in both calls: ordinary and extraordinary. If this happens, it will be recorded as Not Presented in the record of the student in both calls.

The qualification in the ordinary call of the subject will be obtained as:

• 40% of the final exam grade.

• 20% of the grade will be the final project done in group.

• 15% of the grade will be for active participation in class

• 25% of the grade will be for the assignments and evaluation tests.

The delivery of the final project is mandatory and necessary in this call to compute and keep the mark of the final theory exam.

The qualification in the extraordinary call:

In case of having passed the final theory exam or the final project mentioned in the ordinary call, the mark obtained can be saved for the call extraordinary.

• 40% of the final exam grade.

• 20% of the grade will be the final project done in group.

• 15% of the grade will be for active participation in class

• 25% of the grade will be for the assignments and evaluation tests.

To pass the course, students must have at least 5 points on 10 point scale in the final exam, both in the ordinary call and in the extraordinary.

**NOTE**: Regarding the use of generative artificial intelligence tools, their misuse will be considered a serious offense, according to the General Regulations of the University, art. 168.2.e.

## BIBLIOGRAPHY AND RESOURCES

### Basic Bibliography

TEXT BOOK:

Project Managment Institute. “Project Management Body Of Knowlwdge”, 5 th Edition

CASES:

Carlin Data Warehouse, by Prof. Robert Antonides

LAN Installation and Cloud Computing, by Prof. Robert Antonides

AEROCH Chilean Airport Management, by Prof. Robert Antonides

Business Case AEROCH, by Prof. Robert Antonides

Universidad Europea, Dental Chairs Installation Case, by Prof. Robert Antonides

Transport Company Business Case, by Prof. Robert Antonides

Elawan Energy Wind Farm in the UK, by Prof. Robert Antonides

Spanish Business Development Fund, by Prof. Robert Antonides

ARTICLES:

Why Good Projects Fail Anyway, Nadim F. Matta and Ronald N. Ashkenas, Harvard Business Review.

10 Project Mistakes That Fail a Project, Zilicus PM

Top 14 Big Data Projects, InterviewBit, January 18, 2022

The Art of Project Leadership: Delivering the World's Largest Projects, David Knox, Mike Ellis, Rod Speering, Sergey Asvadurov, Tom Brinded, Trevor Brown,

McKinsey & Co. Megaprojects,

The Good, The Bad, and the Better, Nicklas Garemo Stefan Matzinger Robert Palter, McKinsey & Company.

Improving Project Stakeholders' Commitment Using Earned Value Management, Alexandre Novaes Olivieri, 2006

Basic Concepts of Earned Value Management, Humphrey's Associates, 2006

Earned Value Management Systems, Richard W. Reichel, 2006

Article – Successful Complex IT Projects, Ting Liu, Lyndsey Sterritt, and Jingjing Wang, Lancaster University Management School.

The SCRUM Guide, The Definitive Guide to SCRUM: The Rules of the Game, Ken Schwaber and Jeff Suderland.

SCRUM Methodology, Sakshi Sachdeva, International Journal of Engineering and Computer Science, Volume 5, Issue 6, June 2016

The Agile Manifesto, Atlassian Atlassian,

The Aguile Coach, by Atlassian (a series of short texts about the different components of the Agile SCRUM methodology

Agile Project Management Approach and its Use in Big Data Management Projects; by Patrícia Franková, Martina Drahošová, Peter Balco; © 2016 The Authors. Published by Elsevier B

The SCRUM Guide, the Definitive Guide to SCRUM, the Rules of the Game; Ken Schwaber & Jeff Sutherland November 2020; This publication is offered for license under the Attribution Share-Alike license of Creative Commons, accessible at https://creativecommons.org/licenses/by-sa/4.0/legalcode and also described in summary form at https://creativecommons.org/licenses/by-sa/4.0/.

Gestión de Proyectos, SCRUM Manager; Juan Palacios; De la edición: Scrum Manager, ®Información de derechos y licencia de uso http://www.safecreative.org/work/1504243922697

VIDEOS:

Video – Agile Fundamentals https://www.youtube.com/watch?v=BIHZFPCukcQ GUÍA DOCENTE 2024 - 2025 Serie de 10 Videos de Altassian sobre Agile y SCRUM

Video 1 – ¿Que es SCRUM? El Orientador Ágil. https://www.youtube.com/watch?v=b02ZkndLk1Y&t=3s

Video 2 – How Scrum Works Funcionamiento del método scrum. El orientador ágil. Ep. 2 - YouTube

Video 3 – the Agile Coach – Scrum Roles Explicación de las funciones de scrum. El orientador ágil. Ep. 3 - YouTube

Video 4 – Scrum Artifacts Artefactos de scrum. El orientador ágil. Ep. 4 - YouTube

Video 5 – Sprint Planning Conceptos básicos sobre la planificación de sprints bien aplicada. El orientador ágil. Ep. 5 - YouTube

Video 6 - Product Backlog Grooming Cómo preparar el backlog correctamente. El orientador ágil. Ep. 6 - YouTube

Video 7 – Sprint Planning Meeting Cómo celebrar una reunión correcta de planificación de sprints. El orientador ágil. Ep. 7 - YouTube

Video 8 - How to Have Successful Daily Standups Cómo celebrar reuniones rápidas de scrum diarias correctamente. El orientador ágil. Ep. 8 - YouTube

Video 9 – Sprint Review Meetings Reuniones de revisión de sprint. El orientador ágil. Ep. 9 - YouTube

Video 10 – Retrospectives Retrospectivas ágiles bien aplicadas. El orientador ágil. Ep. 10 - YouTube

Video – How to Manage Risk in Scrum Traditional vs. Agile Risk Management - YouTube

Video – Budgeting in Scrum Elaboración de presupuestos en proyectos ágiles | Practicantes ágiles # 2 - YouTube Video – Jira https://www.youtube.com/watch?v=GWxMTvRGIpc Video – Jira demo from Atlassian https://www.youtube.com/watch?v=PQa3NFB_LRg&t=10s