



INTERNATIONAL
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COORDINATION PROCESS OF
LEARNING ACTIVITIES
PR/CL/001



E.T.S. de Ingenieros
Industriales

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

53001519 - Project Management Pmp

DEGREE PROGRAMME

05BD - Master Universitario En Ingenieria De La Organizacion

ACADEMIC YEAR & SEMESTER

2022/23 - Semester 1

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1. Description

1.1. Subject details

Name of the subject	53001519 - Project Management Pmp
No of credits	3 ECTS
Type	Optional
Academic year of the programme	Second year
Semester of tuition	Semester 3
Tuition period	September-January
Tuition languages	English
Degree programme	05BD - Master Universitario en Ingenieria de la Organizacion
Centre	05 - Escuela Técnica Superior De Ingenieros Industriales
Academic year	2022-23

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Isabel Ortiz Marcos (Subject coordinator)		isabel.ortiz@upm.es	--

* The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

- Dirección De Proyectos Avanzada

3.2. Other recommended learning outcomes

The subject - other recommended learning outcomes, are not defined.

4. Skills and learning outcomes *

4.1. Skills to be learned

CB07 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio

CE07 - Organizar, planificar, liderar y controlar equipos y proyectos en un contexto multidisciplinar haciendo uso de los estándares más actuales en Dirección de Proyectos

CG04 - Comprender las relaciones entre la estrategia y el diseño de una organización, sus condiciones de funcionamiento y las características del entorno económico, político, normativo, social, tecnológico y medioambiental en que se desenvuelve

CG07 - Modelar diferentes problemas de diseño de las organizaciones, conocer y seleccionar técnicas de Ingeniería de Organización apropiadas, así como obtener, comunicar, discutir y aplicar los resultados correspondientes

CT01 - Aplica. Habilidad para aplicar conocimientos científicos, matemáticos y tecnológicos en sistemas relacionados con la práctica de la ingeniería

CT02 - Experimenta. Habilidad para diseñar y realizar experimentos así como analizar e interpretar datos

CT04 - Trabaja en equipo. Habilidad para trabajar en equipos multidisciplinares

CT07 - Comunica. Habilidad para comunicar eficazmente

CT08 - Entiende los impactos. Educación amplia necesaria para entender el impacto de las soluciones ingenieriles en un contexto social global

CT09 - Se actualiza. Reconocimiento de la necesidad y la habilidad para comprometerse al aprendizaje continuo

CT12 - Es bilingüe. Capacidad de trabajar en un entorno bilingüe (inglés/español)

CT13 - Planifica. Organización y planificación en el ámbito de la empresa, y otras instituciones y organizaciones de proyectos y equipos humanos

4.2. Learning outcomes

RA68 - Define and understand the defined processes, methodologies and concepts in the nine knowledge areas of the PMI® PMBOK® Guide, preparing for the PMP® Credential Examination.

RA69 - Describe and execute project management principles and techniques, the PMI® certification process and the criteria for certification.

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

Course content is aligned with PMI®'s global standard A Guide to the Project Management Body of Knowledge (PMBOK® Guide) and fulfills the 35 hours of project management education required to apply for the PMP (or CAPM) Exam.

The course is organized around the 10 project management areas of knowledge and the five process groups as defined in the PMBOK® Guide. The course is organized to deliver two teaching hours per week with the most important concepts to face the PMP (or CAPM) exams.

Participants are required to actively participate in exercises to discover / learn new knowledge and to gain practice

for specific course module objectives. Participants are required to complete reading assignments for each of the content areas.

5.2. Syllabus

1. Project management framework
 - 1.1. PMBOK® Guide ? structure and intent
 - 1.2. Describing project management terminology and definitions
 - 1.3. Differentiating between project, program, portfolio, and operations management
 - 1.4. Defining various lifecycle approaches
 - 1.5. Understanding project management data and information
 - 1.6. Describing Enterprise Environmental Factors (EEFs) and Organizational Process Assets (OPAs)
 - 1.7. Assessing the skills and qualities of a project manager
 - 1.8. Defining the competencies of a project manager
2. Project Integration Management
 - 2.1. Review Project Integration Management Knowledge Area
 - 2.2. Develop project charter
 - 2.3. Develop project management plan
 - 2.4. Direct and manage project work
 - 2.5. Manage project knowledge
 - 2.6. Perform integrated change control
 - 2.7. Close project or phase
3. Project Stakeholder Management
 - 3.1. Review Project Stakeholder Management Knowledge Area
 - 3.2. Identify stakeholders
 - 3.3. Plan stakeholder engagement
 - 3.4. Manage stakeholder engagement
 - 3.5. Monitor stakeholder engagement
4. Project Scope Management
 - 4.1. Review Project Scope Management Knowledge Area
 - 4.2. Plan scope management
 - 4.3. Collect requirements

- 4.4. Define scope
- 4.5. Create WBS
- 4.6. Validate scope
- 4.7. Control scope
- 5. Project Schedule Management
 - 5.1. Review Project Schedule Management Knowledge Area
 - 5.2. Plan schedule management
 - 5.3. Define activities
 - 5.4. Sequence activities
 - 5.5. Estimate activity durations
 - 5.6. Develop schedule
 - 5.7. Control schedule
- 6. Project cost management
 - 6.1. Review Project Cost Management Knowledge Area
 - 6.2. Plan cost management
 - 6.3. Estimate cost
 - 6.4. Determine budget
 - 6.5. Control budget
- 7. Project Resource Management
 - 7.1. Review Project Resource Management Knowledge Area
 - 7.2. Plan resource management
 - 7.3. Estimate activity resources
 - 7.4. Acquire resources
 - 7.5. Develop team
 - 7.6. Manage team
 - 7.7. Control resources
- 8. Project quality managaement
 - 8.1. Review Project Quality Management Knowledge Area
 - 8.2. Plan quality management

- 8.3. Manage quality
- 8.4. Control quality
- 9. Project risk management
 - 9.1. Review Project Risk Management Knowledge Area
 - 9.2. Plan risk management
 - 9.3. Identify risks
 - 9.4. Perform qualitative risk analysis
 - 9.5. Perform quantitative risk analysis
 - 9.6. Plan risk responses
 - 9.7. Implement risk responses
 - 9.8. Monitor risks
- 10. Project communications management
 - 10.1. Review Project Communications Management Knowledge Area
 - 10.2. Plan communications management
 - 10.3. Manage communications
 - 10.4. Monitor communications
- 11. Project procurement management
 - 11.1. Review Project Procurement Management Knowledge Area
 - 11.2. Plan procurement management
 - 11.3. Conduct procurements
 - 11.4. Control procurements
- 12. Summary and next steps

6. Schedule

6.1. Subject schedule*

Week	Classroom activities	Laboratory activities	Distant / On-line	Assessment activities
1	<p>Concepts:Project Management Framework Duration: 00:30 Lecture</p> <p>Exam simulation PM Framework Duration: 01:30 Problem-solving class</p>			
2	<p>Project Integration Management Duration: 00:30 Lecture</p> <p>Exam simulation Project Integration management Duration: 01:30 Problem-solving class</p>			
3	<p>Concepts: Project Stakeholder management Duration: 00:30 Lecture</p> <p>Exam simulation Project Stakeholder management Duration: 01:30 Problem-solving class</p>			
4	<p>Concepts: project scope management Duration: 00:30 Lecture</p> <p>Exam simulaiton. Project scope management Duration: 01:30 Problem-solving class</p>			
5	<p>Concepts: project schedule management Duration: 00:30 Lecture</p> <p>Exam simulation. Project schedule management Duration: 01:30 Problem-solving class</p>			
6	<p>Concepts. Cost management Duration: 00:30 Lecture</p> <p>Exam simulation. Cost management Duration: 01:30 Problem-solving class</p>			

7	<p>Middle term review Duration: 02:00 Cooperative activities</p>			<p>Middle term evaluation Online test Continuous assessment and final examination Presential Duration: 02:00</p>
8	<p>Concepts. Resource management Duration: 00:30 Lecture</p> <p>Exam simulation. Resource management Duration: 01:30 Problem-solving class</p>			
9	<p>Concepts. Quality management Duration: 00:30 Lecture</p> <p>Exam simulation. Quality management Duration: 01:30 Problem-solving class</p>			
10	<p>Concepts. Risk management Duration: 00:30 Lecture</p> <p>Exam simulation. Risk management Duration: 01:30 Problem-solving class</p>			
11	<p>Concepts. Communication management Duration: 00:30 Lecture</p> <p>Exam simulation. Communication management Duration: 01:30 Problem-solving class</p>			
12	<p>Concepts. Procurement management Duration: 00:30 Lecture</p> <p>Exam simulation. Procurement management Duration: 01:30 Problem-solving class</p>			
13	<p>Summary and next steps Duration: 02:00 Cooperative activities</p>			
14	<p>Exam simulation Duration: 02:00 Problem-solving class</p>			<p>Exam simulation Online test Continuous assessment and final examination Presential Duration: 02:00</p>
15	<p>Exam simulation Duration: 02:00 Problem-solving class</p>			<p>Exam simulation Online test Continuous assessment and final examination Presential Duration: 02:00</p>

16	Exam simulation Duration: 02:00 Problem-solving class			Exam simulation Online test Continuous assessment and final examination Presential Duration: 02:00
17	Exam Duration: 02:00 Additional activities			Exam Online test Continuous assessment and final examination Presential Duration: 02:00

Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

* The schedule is based on an a priori planning of the subject; it might be modified during the academic year, especially considering the COVID19 evolution.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
7	Middle term evaluation	Online test	Face-to-face	02:00	20%	5 / 10	CT12 CT13 CE07
14	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CT12 CG07 CT13 CT09 CE07
15	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CB07 CT12 CG07 CT13 CT09 CE07 CG04
16	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CT12 CG07 CT13 CT09 CE07 CG04
17	Exam	Online test	Face-to-face	02:00	50%	5 / 10	CT12 CG07 CT13 CT09 CE07 CG04

7.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
7	Middle term evaluation	Online test	Face-to-face	02:00	20%	5 / 10	CT12 CT13 CE07

14	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CT12 CG07 CT13 CT09 CE07
15	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CB07 CT12 CG07 CT13 CT09 CE07 CG04
16	Exam simulation	Online test	Face-to-face	02:00	10%	5 / 10	CT12 CG07 CT13 CT09 CE07 CG04
17	Exam	Online test	Face-to-face	02:00	50%	5 / 10	CT12 CG07 CT13 CT09 CE07 CG04

7.1.3. Referred (re-sit) examination

No se ha definido la evaluación extraordinaria.

7.2. Assessment criteria

Participation during the classes and passing (grade>5 exams simuladions): 50%

Final Exam: 50%

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
Project Management Book of Knowledge. 6 ^a Edition. 2017.	Bibliography	Book needed wit certification content exam.
Kerzner, H. Project Management. A systems approach to planning, scheduling and controlling. 11 ^a ed. Wiley & Sons. Inc. 2013	Bibliography	Interesting book tahat covers exam content.
PMP exam simulator	Web resource	

9. Other information

9.1. Other information about the subject

Classes will help students to:

*Clarify main concepts to face the certification exam.

*Practice with a virtual tool to prepare students to face the exam.

*Discuss concepts around answers to exam questions.