



POLITÉCNICA

INTERNATIONAL
CAMPUS OF
EXCELLENCE

COORDINATION PROCESS OF
LEARNING ACTIVITIES
PR/CL/001



E.T.S. de Ing. de Caminos
Canales y P.

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

43000418 - Public-private Alliances In Construction, Infrastr

DEGREE PROGRAMME

04AG - Master Universitario En Ingenieria De Caminos, Canales Y Puertos

ACADEMIC YEAR & SEMESTER

2025/26 - Semester 1

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1. Description

1.1. Subject details

Name of the subject	43000418 - Public-Private Alliances In Construction, Infrastr
No of credits	4.5 ECTS
Type	Optional/elective
Academic year of the programme	Second year
Semester of tuition	Semester 3
Tuition period	September-January
Tuition languages	English
Degree programme	04AG - Master Universitario en Ingeniería de Caminos, Canales y Puertos
Centre	04 - E.T.S. De Ing. De Caminos Canales Y P.
Academic year	2025-26

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Juan Molina Millan	2a Planta	juan.molina@upm.es	Th - 11:00 - 14:00 F - 11:00 - 14:00
Vicente Alcaraz Carrillo De Albornoz (Subject coordinator)	2a planta	vicente.alcarazc@upm.es	W - 17:00 - 19:00 Th - 17:00 - 19:00
Antonio Sanchez Soliño	6a planta	antonio.sanchezso@upm.es	W - 17:00 - 19:00 Th - 17:00 - 19:00

* 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

- Economía

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

CGP01 - Capacitación científico-técnica y metodológica para el reciclaje continuo de conocimientos y el ejercicio de las funciones profesionales de asesoría, análisis, diseño, cálculo, proyecto, planificación, dirección, gestión, construcción, mantenimiento, conservación y explotación en los campos de la ingeniería civil. Incorpora las competencias CB6, CB7 y CB8

CGP03 - Conocimiento, comprensión y capacidad para aplicar la legislación necesaria en el ejercicio de la profesión de Ingeniero de Caminos, Canales y Puertos. Incorpora las competencias CB6, CB7 y CB8.

CGP06 - Conocimiento para aplicar las capacidades técnicas y gestoras en actividades de I+D+i dentro del ámbito de la ingeniería civil. Incorpora las competencias CB6, CB7 y CB8.

CGP17 - Capacidad de aplicación de técnicas de gestión empresarial y legislación laboral. Incorpora las competencias CB6, CB7 y CB8.

CT2 - Polivalencia y capacidad de aprendizaje autónomo. Desarrolla la competencia transversal 5ª del Real Decreto.

CT3 - Capacidad de comunicación técnica oral y escrita en lengua inglesa. Desarrolla la competencia transversal 1ª de la normativa UPM.

CT7 - Capacidad de utilización de los servicios de información y comunicación para el ejercicio de las funciones profesionales del perfil de egreso. Desarrolla la competencia transversal 3ª de la normativa UPM.

4.2. Learning outcomes

RA212 - SO1 - The student knows the theoretical and methodological fundamentals and the techniques to analyse the international economy, as well as others such as financing, planning or using techniques and business management related to infrastructures and civil engineering services in an international context.

* 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

Public Administrations have several procurement alternatives, in order to materialize the public infrastructure, facilities and services under their responsibility. Although the majority of these projects come to fruition under EPC (Engineering, Procurement and Construction) Contracts, this is not the only possibility for the public sector in many countries. Since the middle of the 90's other arrangements have been gaining steadily marketshare to traditional EPC Contracts: Public-Private Partnerships. These long-term arrangements sometimes present advantages when compared to other public contracts - such as a more efficient delivery of the projects, through a better distribution of the risks involved. These arrangements are nevertheless very complex when compared to the traditional approach, and deserve to be studied. Undoubtedly, this is a field that will continue to gain ground in the future, as more private capital inflows continue to finance public projects.

5.2. Syllabus

1. Conceptual issues and methods of Public- Private Partnership
2. Legal framework of the Public-Private Partnership Model
3. Economic Bases
4. Public-Private Partnership project implementation: Administration?s activity
5. Activity of the private sponsor
6. Users perspective
7. Projects financing
8. PPP Sectors

6. Schedule

6.1. Subject schedule*

Week	Type 1 activities	Type 2 activities	Distant / On-line	Assessment activities
1	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
2	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
3	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
4	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
5	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
6	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00
7	Explicaciones del profesor Duration: 03:00 Lecture		Auto-estudio Duration: 03:00 Additional activities	Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00

8	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
9	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
10	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
11	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
12	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
13	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
14	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
15	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>
16	<p>Explicaciones del profesor Duration: 03:00 Lecture</p>		<p>Auto-estudio Duration: 03:00 Additional activities</p>	<p>Preparación de clases, casos de estudio, etc. Individual work Progressive assessment Presential Duration: 01:00</p>

17				Examen final Written test Progressive assessment and Global Examination Presential Duration: 02:00 Examen final Written test Global examination Presential Duration: 02:00
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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.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
1	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
2	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
3	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
4	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
5	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
6	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
7	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
8	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
9	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
10	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
11	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
12	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
13	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
14	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
15	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	
16	Preparación de clases, casos de estudio, etc.	Individual work	Face-to-face	01:00	1.5%	0 / 10	

17	Examen final	Written test	Face-to-face	02:00	60%	5 / 10	CGP17 CGP01 CT2 CT7 CT3 CGP06 CGP03
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7.1.2. Global examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Examen final	Written test	Face-to-face	02:00	60%	5 / 10	CGP17 CGP01 CT2 CT7 CT3 CGP06 CGP03
17	Examen final	Written test	Face-to-face	02:00	100%	5 / 10	

7.1.3. Referred (re-sit) examination

No se ha definido la evaluación extraordinaria.

7.2. Assessment criteria

EM1. Attendance and exercises 40%

Description: Attendance and participation during the lessons and resolution of the exercises or case studies which will be done during the lesson.

Evaluation criteria: Each exercise or case-study will be marked from 0 to 10. The score will be the average between all the exercises done during the course.

Place and period: The exercises or case studies can be proposed, without any notice, during a lesson. In this case it will be solved during the class.

EM2. Final exam 60 %

Description: The final exam will consist of a single exam, with a duration of 2 hours. It will consist of theoretical or applied questions.

Evaluation criteria: The final exam will be ranked from 0 to 10. The score will be the weighted average between all the questions.

Place and period: To be determined by the Head of Studies

Result of the evaluation through ?continuous assessment?

The final score will be the weighted average of the results obtained in PE1 and PE2 according to the indicated weights. The subject will be passed if the final score is equal or greater than 5.

For those students following the continuous assessment evaluation, the final mark will not be less than the one obtained at the final exam.

8. Teaching resources

8.1. Teaching resources for the subject

Name	Type	Notes
PPP Reference Guide 3.0 Public Private Partnership	Bibliography	This is the World Bank's PPP reference guide.
PPP Certification program's guides	Bibliography	These are the guides used in the multilaterals certification program.
Sánchez Soliño, A. (2023). Las Colaboraciones Público-Privadas. Fundamentos Económicos. UPM Press	Bibliography	An interesting book describing PPPs' economic fundamental principles. In Spanish.