



POLITÉCNICA

INTERNATIONAL  
CAMPUS OF  
EXCELLENCE

COORDINATION PROCESS OF  
LEARNING ACTIVITIES  
PR/CL/001



E.T.S. de Ingenieros  
Industriales

# ANX-PR/CL/001-01

## LEARNING GUIDE

### SUBJECT

**53001515 - Valuation And Financial Analysis For Startups**

### DEGREE PROGRAMME

05BD - Master Universitario En Ingenieria De La Organizacion

### ACADEMIC YEAR & SEMESTER

2021/22 - Semester 1

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## 1. Description

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### 1.1. Subject details

<b>Name of the subject</b>	53001515 - Valuation And Financial Analysis For Startups
<b>No of credits</b>	3 ECTS
<b>Type</b>	Optional
<b>Academic year of the programme</b>	Second year
<b>Semester of tuition</b>	Semester 3
<b>Tuition period</b>	September-January
<b>Tuition languages</b>	English
<b>Degree programme</b>	05BD - Master Universitario en Ingenieria de la Organizacion
<b>Centre</b>	05 - Escuela Tecnica Superior De Ingenieros Industriales
<b>Academic year</b>	2021-22

## 2. Faculty

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### 2.1. Faculty members with subject teaching role

<b>Name and surname</b>	<b>Office/Room</b>	<b>Email</b>	<b>Tutoring hours *</b>
Rafael Ramos Diaz (Subject coordinator)	UD Economía	rafael.ramos@upm.es	Tu - 12:00 - 13:30

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

## 2.3. External faculty

Name and surname	Email	Institution
Félix Roux Martínez	froux@etsii.upm.es	ETSIIIM

## 3. Prior knowledge recommended to take the subject

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### 3.1. Recommended (passed) subjects

- Finanzas Cuantitativas I
- Finanzas Cuantitativas II

### 3.2. Other recommended learning outcomes

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

## 4. Skills and learning outcomes \*

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### 4.1. Skills to be learned

CB06 - Poseer y comprender conocimientos que aporten una base u oportunidad de ser originales en el desarrollo y/o aplicación de ideas, a menudo en un contexto de investigación

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

CB10 - Que los estudiantes posean las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo

CE10 - Comprender y aprovechar la estructura de opciones subyacente en los proyectos de inversión y su aplicación para la valoración de proyectos, empresas y negocios

CG01 - Utilizar los conocimientos científicos y tecnológicos adquiridos en sus estudios de Grado en Ingeniería como recurso a integrar en la generación de soluciones a problemas de las organizaciones, sean éstos de funcionamiento o de diseño

CG02 - Analizar situaciones estructuradas y poco estructuradas de empresas y otras organizaciones, estableciendo diagnósticos apropiados, en particular, de carácter estratégico

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

CT03 - Diseña. Habilidad para diseñar un sistema, componente o proceso que alcance los requisitos deseados teniendo en cuenta restricciones realistas tales como las económicas, medioambientales, sociales, políticas, éticas, de salud y seguridad, de fabricación y de sostenibilidad

CT05 - Resuelve. Habilidad para identificar, formular y resolver problemas de ingeniería

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

CT10 - Conoce. Conocimiento de los temas contemporáneos

CT11 - Usa herramientas. Habilidad para usar las técnicas, destrezas y herramientas ingenieriles modernas necesarias para la práctica de la ingeniería

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

## 4.2. Learning outcomes

RA42 - Definir y analizar la estructura de financiación óptima de la empresa

RA41 - Enumerar y aplicar las herramientas y técnicas actuales de valoración de empresas

\* 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

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### 5.1. Brief description of the subject

This course on Valuation and Financial Analysis for Startups has the following objectives:

- To gain practical knowledge of the most common business valuation methods: DCF, multiples comparables and options, understanding how said value is established as well as the necessary underlying hypotheses and the advantages and disadvantages and limitations of each method
- To understand the application of business valuation methods in particular cases and, in particular, in the digital domain and the platform ecosystems
- To apply this knowledge to the specific case of startups valuation, this being a particularly interesting particular case due to the relationship with the need to seek financing
- To understand the basics of financial analysis and capital structure for startups
- To develop knowledge of the sources of financing for startups, both private and public

## 5.2. Syllabus

1. REVIEW OF VALUATION METHODS AND CONCEPTS
2. APPLYING THE DCF TO STARTUPS
3. APPLYING MULTIPLES TO VALUATION, DISCUSSION ON EXIT ALTERNATIVES
4. APPLYING OPTIONS TO VALUATION
5. FIRST STEPS IN PRACTICAL FUNDRAISING
6. VALUATION IN PLATFORM ECOSYSTEMS
7. FINANCIAL ANALYSIS AND CAPITAL STRUCTURE FOR STARTUPS
8. APPLYING INVESTMENT DECISION RULES FOR STARTUPS
9. PRIVATE SOURCES FOR STARTUP FINANCING: CROWDFUNDING, ANGEL INVESTORS, VENTURE CAPITAL AND PRIVATE EQUITY
10. PUBLIC SOURCES FOR STARTUP FINANCING
11. GETTING IPO READY

## 6. Schedule

### 6.1. Subject schedule\*

Week	Face-to-face classroom activities	Face-to-face laboratory activities	Distant / On-line	Assessment activities
1	<b>1. REVIEW OF VALUATION METHODS AND CONCEPTS</b> Duration: 02:00 Lecture			
2	<b>2. APPLYING THE DCF TO STARTUPS</b> Duration: 02:00 Lecture			
3	<b>3. APPLYING MULTIPLES TO VALUATION, DISCUSSION ON EXIT ALTERNATIVES</b> Duration: 02:00 Lecture			
4	<b>4. APPLYING OPTIONS TO VALUATION</b> Duration: 02:00 Lecture			
5	<b>5. FIRST STEPS IN PRACTICAL FUNDRAISING</b> Duration: 02:00 Lecture			
6	<b>6. VALUATION IN PLATFORM ECOSYSTEMS</b> Duration: 02:00 Lecture			
7	<b>7. FINANCIAL ANALYSIS AND CAPITAL STRUCTURE FOR STARTUPS</b> Duration: 02:00 Lecture			<b>Online questionnaire</b> Online test Continuous assessment Not Presential Duration: 01:00
8	<b>8. APPLYING INVESTMENT DECISION RULES FOR STARTUPS</b> Duration: 02:00 Lecture			
9	<b>9. PRIVATE SOURCES FOR STARTUP FINANCING: CROWDFUNDING, ANGEL INVESTORS, VENTURE CAPITAL AND PRIVATE EQUITY</b> Duration: 02:00 Lecture			
10	<b>10. PUBLIC SOURCES FOR STARTUP FINANCING</b> Duration: 02:00 Lecture			



11	<b>11. GETTING IPO READY</b> Duration: 02:00 Lecture			
12				<b>Online questionnaire</b> Online test Continuous assessment Not Presential Duration: 01:00
13				
14				
15				
16				
17				<b>Examen final (no evaluación continua)</b> Written test Final examination Not 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. Continuous assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
7	Online questionnaire	Online test	No Presential	01:00	25%	5 / 10	CG01 CB07 CT01 CT11 CT12 CG07 CE10 CG02 CB06 CB10 CT02 CT09 CT10 CT03 CT05 CT08
12	Online questionnaire	Online test	No Presential	01:00	25%	5 / 10	CG01 CB07 CT01 CT11 CT12 CG07 CE10 CG02 CB06 CB10 CT02 CT09 CT10 CT03 CT05 CT08

#### 7.1.2. Final examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Examen final (no evaluación continua)	Written test	No Presential	02:00	100%	5 / 10	CG01 CB07 CT01 CT11 CG07 CE10 CG02 CB06 CB10 CT02 CT09 CT10 CT03 CT05 CT08

### 7.1.3. Referred (re-sit) examination

No se ha definido la evaluación extraordinaria.

## 7.2. Assessment criteria

### Continuous assessment

The final grade for the continuous assessment course will be the result of:

- Average of the marks of the two control tests, one in the middle of the semester and the other at the end of the semester: 50%
- Teamwork: 30%
- Professor assessment (attendance, participation): 20%

**Evaluation only by Final Exam:** test at the end of the semester

## 8. Teaching resources

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### 8.1. Teaching resources for the subject

Name	Type	Notes
MOODLE	Web resource	Temas, casos, lecturas complementarias, foros de debate, cuestionarios de autoevaluación
Félix Roux. Valoración de empresas. Herramientas básicas	Bibliography	
Pablo Fernández, Valoración de empresas	Bibliography	