



POLITÉCNICA

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PR/CL/001



E.T.S. de Ingenieros
Informáticos

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

103000939 - Seminars On Systems For Finance

DEGREE PROGRAMME

10BB - Eit Digital Master Programme On Fintech

ACADEMIC YEAR & SEMESTER

2020/21 - Semester 2

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1. Description

1.1. Subject details

Name of the subject	103000939 - Seminars On Systems For Finance
No of credits	4.5 ECTS
Type	Compulsory
Academic year of the programme	First year
Semester of tuition	Semester 2
Tuition period	February-June
Tuition languages	English
Degree programme	10BB - Eit Digital Master Programme On Fintech
Centre	10 - Escuela Tecnica Superior De Ingenieros Informaticos
Academic year	2020-21

2. Faculty

2.1. Faculty members with subject teaching role

Name and surname	Office/Room	Email	Tutoring hours *
Alejandro Rodriguez Gonzalez (Subject coordinator)		alejandro.rg@upm.es	- -
Ernestina Menasalvas Ruiz	4303	ernestina.menasalvas@upm.es	Sin horario.

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

3. Skills and learning outcomes *

3.1. 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

CE-FT01 - Ability to select the storage solution for both structured and non-structured data more adequate for a given problem

CE-FT02 - Ability to apply the most adequate techniques for the analysis and exploration of data in a financial scenario and to communicate the results of the analysis

CE-FT03 - Ability to select the right techniques and tools for the manipulation of financial data, including its processing and visualization

CE-FT04 - Ability to analyze financial problems and its solving through the application of information and communication technologies

CE-FT05 - Ability to understand basic concepts related with the industries of the financial sector, including fintech, proptech and insurtech domains

CE-FT06 - Ability to understand basic financial concepts of utility in fintech area

CE-FT08 - Ability to know the latest technologies that are applied in finance

CG03 - La capacidad de usar la lengua inglesa de manera competente, es decir, con capacitación para tareas complejas de trabajo y estudio

3.2. Learning outcomes

RA4 - Understand the relevance of continuing education

RA2 - Apply the acquired knowledge in real context

RA3 - Acquire specialized knowledge from innovative fields of studiesowledge in real 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.

4. Brief description of the subject and syllabus

4.1. Brief description of the subject

The module is configured around a series of seminars that address the challenges and opportunities emerging from different aspects of the application of information and communication technologies to the area of finance. The seminars will be given by experts in the field from both companies and research groups and will focus on providing to the student a unique view about how fintech projects and approaches are executed in the real world.

The main topics to be covered by the seminars include, among others:

- Artificial Intelligence in the financial domain
- Regulatory and ethical issues in financial technologies
- Large-scale financial data management
- Real cases of technology adoption and use in financial environments
- Management of non-payment using data mining
- New technologies in finance
- Proptech and insurtech

The topics covered by the seminars will suffer from small variations yearly, amongst those in the above list or other

considered relevant to the subject.

A substantial part of the contents will be based on the interest of students based on case studies, examples, and specificities of this Fintech master course.

The seminars will promote discussions with professionals and experts from renowned ICT companies and research centers.

4.2. Syllabus

1. Data Science Seminars

5. Schedule

5.1. Subject schedule*

Week	Face-to-face classroom activities	Face-to-face laboratory activities	Distant / On-line	Assessment activities
1	Data Science Seminar Duration: 04:00			
2	Data Science Seminar Duration: 04:00			
3	Data Science Seminar Duration: 04:00			
4	Data Science Seminar Duration: 04:00			
5				
6	Data Science Seminar Duration: 04:00			
7	Data Science Seminar Duration: 04:00			
8	Data Science Seminar Duration: 04:00			
9				
10	Data Science Seminar Duration: 04:00			
11	Data Science Seminar Duration: 04:00			
12				
13	Data Science Seminar Duration: 04:00			
14				
15	Data Science Seminar Duration: 04:00			
16				
17				Assessment 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.

6. Activities and assessment criteria

6.1. Assessment activities

6.1.1. Continuous assessment

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Assessment		Face-to-face	02:00	100%	5 / 10	

6.1.2. Final examination

Week	Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
17	Assessment		Face-to-face	02:00	100%	5 / 10	

6.1.3. Referred (re-sit) examination

Description	Modality	Type	Duration	Weight	Minimum grade	Evaluated skills
Assessment		Face-to-face	02:00	100%	5 / 10	

6.2. Assessment criteria

Assessment and Grading Procedures

The evaluation of the students will be based on three main sources:

- Continuous evaluation: activities during lectures (classroom interactivity, short tests, etc.)
- Presentation of individual work (Analysis of case studies)

The student is responsible for enrolling and passing a number of seminars that sum 4,5 or more ECTS, with a grade greater than or equal to 5/10 in each seminar. Workload calculation (contact hours, homework, exam preparation, etc.). The final grade will be calculated as the weighted average of the best grades obtained in enrolled seminars that sum 4,5 ECTS.

The extra examination call will consist of the realization of a number of work assignments proposed specifically for

the call that allow him to pass 4,5 ECTS or more (seminars with a grade equal to or higher than 5 in the ordinary/continuous examination call will count). The work assignments in this call could differ from the ones proposed in the continuous evaluation process. The student is responsible for carrying out and submitting for evaluation of the work assignments proposed in a number of seminars that let him pass a number of seminars that sum 4,5 or more ECTS.

7. Teaching resources

7.1. Teaching resources for the subject

Name	Type	Notes
Slides used in the lectures	Others	Slides used in the lectures
Selected bibliography recommended by the seminar supervisor	Bibliography	Selected bibliography recommended by the seminar supervisor
References of relevant case studies	Web resource	References of relevant case studies

8. Other information

8.1. Other information about the subject

Teaching and learning methods:

The module is organized around a set of seminars that will explain the whole lifecycle of Fintech-based projects in different business and scientific areas. In these seminars, experts from companies, government institutions, research centers and academia will shed light on the opportunities and challenges in Fintech in the coming years, and discuss how to address the challenges and optimally exploit the opportunities related to this field.

The teaching and learning approach include:

- Formal lectures and Discussion
- Individual learning
- Individual or team working assignments focused on case studies
- Preparation of individual or group presentations
- Evaluation of knowledge and competence acquisition through exams, homework assignments or classroom participation

ECTS distribution (4,5 ECTS):

Each seminar will be responsible of teaching and evaluating 0,5 or 1 ECTS

The student is responsible for enrolling and passing a number of seminars that sum 4,5 or more ECTS, with a grade greater than or equal to 5/10 in each seminar.

Workload calculation:

Each seminar will be responsible for teaching and evaluating 0,5 or 1 ECTS (i.e. 13,5 / 27 hours of workload) with the following workload distribution (considering 0,5 ECTS per seminar):

- 2-4 hours lecturing
- 5-7 hours for individual work
- 4 hours for exam preparation (including materials for presentation and/or assignment deliverables)
- Personal tuition will be offered to students or teams (average 1,5 hour)

Frequency and dates:

This course will be organized during the second semester of the 1st year.

4 - 5,5 contact hours (lecturing, personal tuition) per week, in alternate weeks.

Max. number of participants:

The course is limited to a maximum of 30 students

Enrollment procedure:

Enrollment is not independent of the general enrollment process of the Fintech master.

The course is a mandatory unit of the first year major. All students in the Fintech master diploma must cover it.

Other information:

The module will have an entry in the UPM e-learning platform (Moodle), which will be made available to students.

Access to documents included in the ICT-Labs Master School web site will be also made available to students.

UPM bibliographic funds and reference tools will be available for students.