1. BASIC INFORMATION

Course	**Module VIII. Finance and Information Management (Big Data, Business Analytics, Fintech)**
Degree program	Master's Degree in Financial Management
School	Faculty of Economics, Business, and Communication
Year	1
ECTS	6
Credit type	Obligatory
Language(s)	English
Delivery mode	Campus-based
Semester	Second
Academic year	2024-2025
Coordinating professor	Dr. Hubert Augusto Joo Kitano

2. PRESENTATION

Module 8: Finance and Information Management (Big Data, Business Analytics, Fintech) is a module in the Master's in Financial Management, valued at 6 ECTS, like the other modules in the program. This course covers current and relevant topics for finance professionals—topics that are essential to understanding the present context of a sector undergoing continuous transformation.

In the first part, the course aims to provide students with knowledge on the contribution and application of Big Data in the financial sector, as well as data visualization techniques and tools, followed by practical applications of Business Analytics in financial decision-making. The second part offers participants a holistic view of the transformation in the financial and banking industry due to the rise of startups and the development of Fintech over the past decade. Additionally, it will cover the main characteristics of the platform economy, with a particular focus on those with a collaborative nature. Finally, it will explain how the crowd movement influences the financing market for businesses and individuals.

3. LEARNING OUTCOMES

Knowledge

CON4. Identify the key technological, IT, and financial tools (fintech) currently available in the financial sphere.

- Examine the relevance of data in today's business environments.
- Examine the implementation and execution of a specific business analytics project.

Skills

HAB4. Design ways of extracting information from databases (big data), applying business intelligence and fintech techniques.

- Analyse the advantages of market positioning using big data.
- Deduce relevant information and draw appropriate conclusions about the company's finances based on the use of tools and data visualization.
- Test business models and basic application areas for financial technologies (fintech).
- Explore financial decision-making using business analytics.

Competences

COMP3. Select the most appropriate IT tools for extracting database information for decision-making in uncertain global environments.

COMP15. Use financial technology (fintech) tools and business analytics techniques for financial decision-making.

COMP18. Show ethical behavior and social commitment in the performance of professional activities and sensitivity to inequality and diversity.

4. CONTENT

- Importance and contribution of Big Data: exploitation for commercial purposes, strategies and positioning.
- Data Visualisation: visualisation tools (Cognos, Tableau).
- Analytical techniques in business analytics: decision making in business analytics.
- Business analytics in finance: how to apply a business analytics project to the financial field.
- Fintech: introduction, regulation of financial technologies, functional fintech areas.
- Basic fintech areas: payment methods (currencies), financing, financial infrastructure (mobile banking), cryptocurrencies, crowdfunding and crowdlending.

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lectures
- Case studies
- Collaborative learning
- Problem-based learning

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Lectures	10
Practical application seminars	20
Independent study	50
Synchronous online academic tutorials	18
Debates and colloquiums	8
In-person evaluation tests	2
Solving case studies	10
Problem-solving	22
Drawing up reports and written work	10
Total	**150**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
In-person evaluation tests	60%
Reports and written documents	15%
Case/problem	25%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. Ordinary exam call

To pass the subject in the ordinary exam call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the subject's final grade (weighted average).

In any case, you must obtain a grade greater than or equal to 5.0 on the final test so that it can be averaged with the rest of the activities.

7.2. Extraordinary exam call

To pass the subject in the extraordinary exam call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the subject's final grade (weighted average).

In any case, it will be necessary for you to obtain a grade greater than or equal to 5.0 in the final test so that it can be averaged with the rest of the activities.

The activities not passed or submitted in the ordinary call must be submitted after the instructor has provided the corresponding corrections and feedback.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Campus-based mode:

Assessable activities	Deadline
Data Transformation and Visualization using OLAP and Dashboards	Week 28
Business Intelligence	Week 31
Risk Model Implementation and Big Data Application in Finance	Week 34
Analysis of a FinTech Startup	Week 37
In-person evaluation tests	Week 38

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference work for this subject is:

- Choi, P. M. S., & Huang, S. H. (Eds.). (2021). *Fintech with Artificial Intelligence, Big Data, and Blockchain*. Springer Nature.
- Gorelik, A. (2019). *The enterprise big data lake: Delivering the promise of big data and data science*. O'Reilly Media.
- Hilpisch, Y. (2020). *Artificial Intelligence in Finance*. O'Reilly.
- Sironi, P. (2016). *Fintech Innovation: From robo-advisors to goal-based investing and gamification*. Wiley Finance Series.
- Tapscott, A., & Tapscott, D. (2016). *La revolución blockchain: Descubre cómo esta nueva tecnología transformará la economía global*. Deusto Ediciones.

The recommended Bibliography is:

- Alexander, C. (2008). *Quantitative Methods in Finance (Volume I)*. John Wiley & Sons.
- Blasco Bocigas, P. (2021). *Fintech Banking: Las finanzas del futuro y el nuevo mundo del dinero*. Lid Editorial.
- Cusumano, M. A. (2020). *The Future Of Platforms*. MIT Sloan Management Review.
- King, B. (2018). *Bank 4.0: Banking everywhere, never at a bank*. Marshall Cavendish Editions.
- Sanjay Phadke. (2020). *Fintech Future: The Digital DNA of Finance*. Sage.

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.