COURSE DATA

DATA SUBJECT

Code: 42203
Name: Numerical calculus in finances
Cycle: Master's Degree
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2081 - Master's Degree in Banking and Quantitative Finance	Facultat d'Economia	1	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
2081 - Master's Degree in Banking and Quantitative Finance	Compulsory subjects	COMPULSORY

COORDINATION

BENITEZ SUAREZ RAFAEL

SUMMARY

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

DESCRIPTION OF CONTENTS

1.

2.

3.

4.

5.

6.

7.

8.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Computer classroom practice	15,00
Classroom practices	15,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00

Resolution of case studies	0,00
Total hours	**0,00**

TEACHING METHODOLOGY

EVALUATION

REFERENCES

- M. T. Heath (2001) Scientific Computing: An Introductory Survey, 2nd. ed. McGraw-Hill. P. Glasserman (2003): Monte Carlo Methods in FinancialEngineering Springer-Verlag. P. Wilmott, S. Howison, and J. Dewinne (1996) The mathematics of Financial Derivatives Cambridge University Press.

- C.-E. Fröberg (1985) Numerical Mathematics. Theory and Computer Applications. Addison-Wesley. W.H. Press, S. A. Teukolsky, W. T. Vettering and B. P. Flannery, (1992) Numerical Recipes in C: The art of Scientific Computing Paul Wilmott (1999) Derivatives: The theory and Practice of Financial Engineering John Wiley and Sons NY J. Michael Steele Stochastic Calculus and Financial Applications, Springer Verlag; (2000) P. J. Brockwell and R. A. Davies (1996) Introduction to Time Series and Forecasting Springer-Verlag. P. J. Brockwell and R. A. Davies (1991) Time Series: Theory and Methods J. D. Hamilton (1994) Time series analysis Princeton University Press, Princeton. J.C. Hull (2000) Options, Futures and other derivatives Prentice Hall. G.D. Smith (1985) Numerical solution of partial differential equations: Finite difference methods, Clarendon Press, Oxford.