

**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.

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## WORKLOAD

### PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Computer classroom practice	15,00
Classroom practices	15,00
<b>Total hours</b>	<b>60,00</b>

### 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
<b>Total hours</b>	<b>0,00</b>

## TEACHING METHODOLOGY

## EVALUATION

## REFERENCES

- M. T. Heath (2001) Scientific Computing: An Introductory Survey, 2nd. ed. McGraw-Hill. P. Glasserman (2003): Monte Carlo Methods in Financial Engineering 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. Vetterling 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.