

General Information	
Academic subject	Financial mathematics
Degree course	Marketing and Business Communication
Curriculum	
ECTS credits	6
Compulsory attendance	No
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Sabrina Diomede	sabrina.diomede@uniba.it	SECS-S/06

ECTS credits details	6		
Basic teaching activities	lectures		

Class schedule	
Period	II
Year	2
Type of class	Lectures

Academic calendar	
Class begins	02/2024
Class ends	05/2024

Syllabus	
Prerequisites/requirements	Completion of the examination "Mathematics for economics"
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	<p>Demonstrate understanding of basic concepts in financial transactions.</p> <p>Demonstrate capability to estimate the value of annuities</p> <p>Use appropriate terminology to convey basic financial tools and notions.</p> <p>Demonstrate basic knowledge of preference relations and utility functions</p>
Contents	•
Course program	<p>Decision making under certainty</p> <p>Financial operations.</p> <p>Discounting and capitalization. Application to the estimate of some indexes in marketing: the notions of Customer and Prospect lifetime value</p> <p>Compound and simple interest formulae.</p> <p>Zero coupon and fixed rate bonds.</p> <p>Estimating the value of financial operations.</p> <p>Hints on numerical series; geometric series.</p> <p>Annuities (classification, ordinary and deferred annuities. ordinary perpetuities, present and future value of annuities)</p> <p>Equivalent interest rates.</p> <p>Discounted net profit, Internal Rate of Return</p>

	<p>Amortization (preamortization, amortization schedule with equal principal payments or with constant payments) Time indexes. Duration. Basic notions of differential calculus for 2 variables functions. First-order conditions for unconstrained and constrained optimization. Choices under uncertainty Rational preferences Representation of choice structure by means of utility functions Pareto dominance</p>
Bibliography	<p>F. Cacciafesta: Matematica finanziaria (classica e moderna) Giap Ed. Torino. (ch. 1, par. 1-5), ch.2, (par. 1-5), ch. 3 (par. 1,2), ch 1-7)ch. 5 (par. 1-5) For Erasmus students: E. Castagnoli, M. Cigola, L. Pecco Financial calculus with applications. Egea, 2013.</p>
Notes	
Teaching methods	Lectures
Assessment methods (indicate at least the type written, oral, other)	<p>Written assessment with three questions. As an alternative, the attending students may take 2 midterm (written) exams to be integrated with a discussion about their texts to be held in the first date of the June session</p>
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are.	<p>The answers will be evaluated by: completeness of presentation with respect to the contents of the course , correctness of mathematical reasoning, articulation of presentation, command of mathematical and technical language.</p>
Further information	