

**SUBJECT SYLLABUS
ACADEMIC OVERVIEW
INTERNATIONAL SCHOOL OF ECONOMIC & ADMINISTRATIVE SCIENCES**

COURSE NAME AND CODE: Financial Mathematics (81118)

PROGRAM:

Bachelor of Business Administration (BBA),
Bachelor of Administration & Service (BA&S)
Bachelor of International Business (BIB)

Bachelor of International Marketing & Logistics Administration (BIMLA)
Bachelor of Economics & International Finance (BEIF)
Bachelor of Gastronomy (GAS)

LEVEL OF STUDY: Undergraduate Programme

| GENERAL ACADEMIC INFORMATION | | | |
|-----------------------------------|-----------|----------|--|
| LATEST UPDATE | 2020-2 | | |
| ACADEMIC DEPARTMENT | Finance | | |
| SUBJECT TYPE | Mandatory | | |
| LANGUAGE | Spanish | | |
| SEMESTER | Programme | Semester | |
| | BBA | 4 | |
| | BA&S | 4 | |
| | BIB | 3 | |
| | BIMLA | 4 | |
| | BEIF | 3 | |
| | GAS | 4 | |
| NUMBER OF ACADEMIC CREDITS | 2 | | |

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| HOURS OF ACADEMIC WORK | 96 | CONTACT HOURS | 48 | HOURS OF INDEPENDENT/AUTONOMOUS WORK | 48 | |
| LEARNING PREREQUISITES | <ul style="list-style-type: none">Master basic mathematical concepts to solve equations of one or more unknowns.Remember the properties of real numbers: commutative, associative, distributive, properties of negatives, fractions, exponents, roots, and logarithms. | | | | | |
| INTERNATIONAL COMPONENT | <ul style="list-style-type: none">National and international standards, policies, regulations and mores related to the professional field.Vocabulary and technical language to communicate in different cultural contexts. | | | | | |
| SUSTAINABLE DEVELOPMENT GOALS (SDG) | 4. Quality Education | | | | | |
| COURSE DETAILS | | | | | | |
| COURSE DESCRIPTION | Students related to professions of economic and administrative sciences must know and master the mathematical techniques and operations governed by the principle of the value of money over time, which allow them to make various investment decisions when using interest rates to calculate the profitability of these, the cost of the credits, amortize credits of different modalities or define the price of a contract. This course is necessary to give continuity to the entire financial line, since its bases are required to evaluate credits, investments, define the price of securities, understand the tools used in business financial diagnosis, international business due to its application at rates. exchange, among others. | | | | | |
| KEY WORDS: | Financial mathematics, interest rates, annuity, gradients, amortization tables. | | | | | |
| COMPETENCES DEVELOPED | EICEA ILOS or Programme ILOS | Course ILOS | Type | Content | Teaching and Learning strategy | Assessment Method |
| | ILO02 | Implement the equal, increasing or decreasing payment series in the loan amortization tables | Skill | Annuities Gradients Perpetuities Amortization Systems | Problems Based Learning | <u>Method:</u> Supervised Practice and Demonstration <u>Technique:</u> Interview and triangulation |

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| | | and in the valuation of companies or projects | | | | <i><u>Instrument:</u></i> Check List, Value scales, rubrics. |
| | ILO06 | Describe the types of interest rates and their conversion to make better financial decisions. | Knowledge | Simple interest Compound interest Anticipated and Past Due Interest Nominal and Effective Rates Indexed Rates Conversion between interest rates | Theoretical Class | <i><u>Method:</u></i> exam, written exam, concept maps. <i><u>Technique:</u></i> Documentary and productions analysis, content analysis, and wrappers exam. <i><u>Instrument:</u></i> Check List, Value scales, rubrics. |
| <p>ILO02: Critical Thinking: Evaluate information using critical and analytical reasoning to address changing economic and business situations.</p> <p>ILO06: Understand principles and concepts of administration: Demonstrate specific knowledge in the field according to the level of study (Bachelor).</p> | | | | | | |
| BIBLIOGRAPHY | <ul style="list-style-type: none"> • Bodie, Zvi, Kane & Marcus (2011). Investments. Editorial McGraw Hill. • Hull, J., & de Miguel, A. (2009). Introducción a los mercados de futuros y opciones. Pearson Educación. • Informes financieros locales e internacionales (Portafolio, La República, Bancolombia, Credicorp Capital, CNBC, Yahoo Finance, etc.) • Software y herramientas del laboratorio financiero de la Universidad: Bloomberg, punto BVC, punto BMC, Visual Basic e Internet. | | | | | |