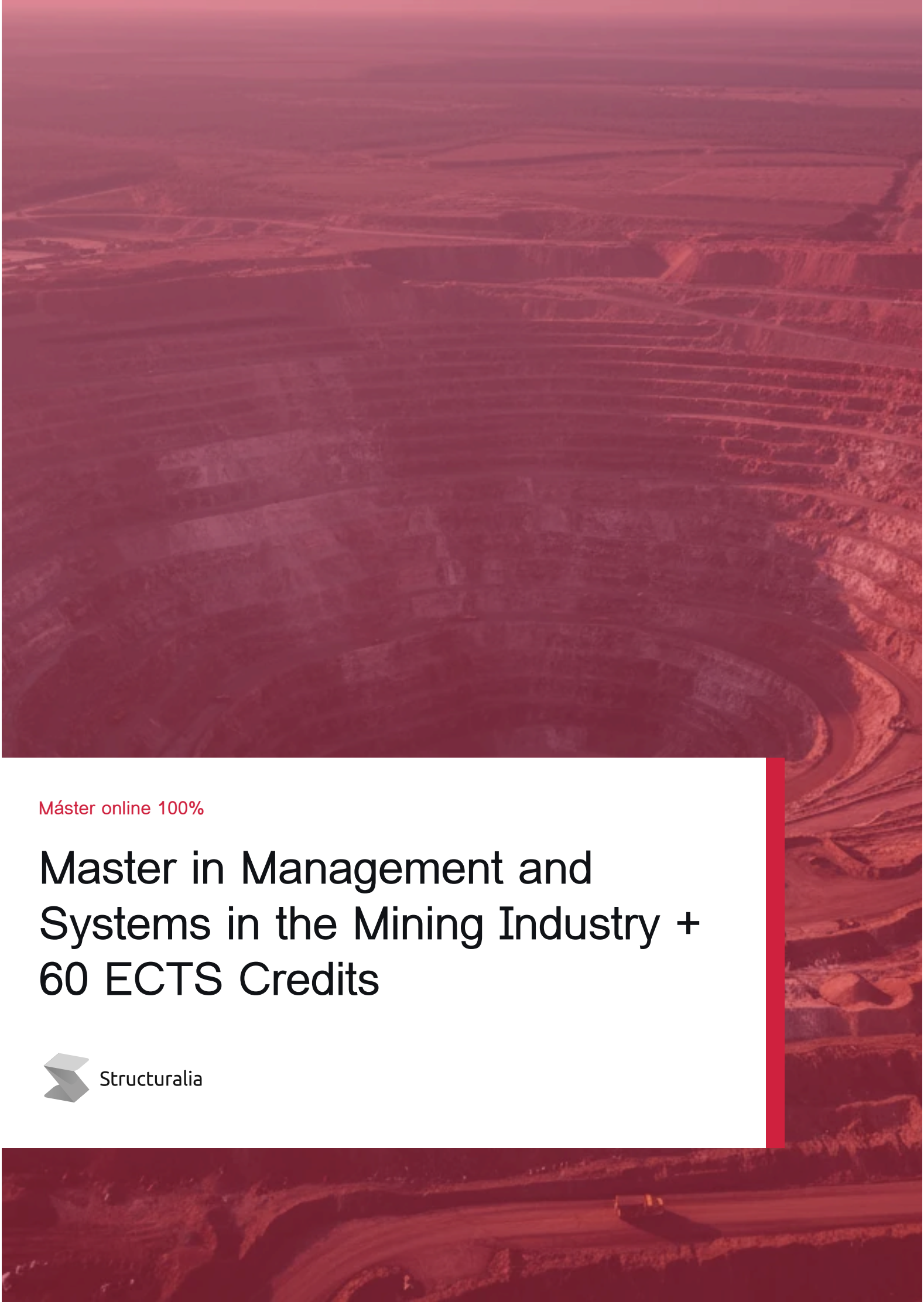


Máster online 100%

Master in Management and Systems in the Mining Industry + 60 ECTS Credits

Structuralia

Máster online 100%

Master in Management and Systems in the Mining Industry + 60 ECTS Credits

Modality
Online

Languages
Español

Duration
1500 hours (60 ECTS)

No Limit
AI Assistant

Does it include practices?
NO

Educational Institutions

Structuralia Engineering eLearning

UNIVERSIDAD NEBRIJA

Summary

The Master in Management and Systems in the Mining Industry is the advanced specialization for professionals who seek to strengthen and develop skills in the strategic, technical, operational and administrative management of the mining value chain. You recognize the critical need to optimize the mining value chain and high- and mid-level planning to manage significant resources. This program immerses you in the characterization and key factors of the global mining industry, allowing you to analyze its current processes and trends with an expert perspective. You will learn to integrate a strategic vision that ranges from the introduction to the business value chain to the industrial use of mining and its impact areas. You will develop the skills to make informed decisions about operations and investments, strengthening the social and economic impact of mining on a global scale. You will delve into the exploration and geological evaluation of the deposit, and the mining approach and planning strategies, from the initial conception to the detailed design of the infrastructure. With this master's degree, you will transform your approach to resource management,

increasing efficiency and sustainability at each stage of the mining business, preparing you to lead complex and strategic projects in any international context.

Agenda

MODULE 1. THE MINING INDUSTRY AND BUSINESS IN THE WORLD

1. DIDACTIC UNIT 1. INTRODUCTION TO THE BUSINESS VALUE CHAIN

1. Generalities of the mining business
2. Conceptual framework of the mining business
3. Society is mineral. Dependent
4. Mining value chain and its components
5. Quantity. Field size and production scale

2. DIDACTIC UNIT 2. CHARACTERIZATION AND KEY FACTORS OF THE WORLD MINING INDUSTRY

1. Stages of mining activity
2. Mining exploration
3. Mineralurgical study and engineering of the project
4. Preparation or treatment of minerals
5. Economic and social impact of mining projects

3. DIDACTIC UNIT 3. INDUSTRIAL USE OF MINING AND ITS IMPACT AREAS

1. Environmental impact of mining projects
2. Professional responsibility in projects (I)
3. Professional responsibility in projects (II)
4. Nature and importance of the supply of mineral raw materials
5. Industrial use

4. DIDACTIC UNIT 4. PROCESSES AND TRENDS OF THE MINING BUSINESS

1. Engineering in the field of the mining industry
2. Factors covered by mining engineering
3. Need to integrate mining into a sustainable development strategy
4. Mining politics and economics
5. Four trends for tomorrow's success in mining activity

MODULE 2. EXPLORATION, PLANNING AND DESIGN OF MINING INFRASTRUCTURE

1. DIDACTIC UNIT 1. EXPLORATION AND GEOLOGICAL EVALUATION OF THE DEPOSIT

1. Prospecting. previous stages of recognition and basic geological evaluation
2. Surface geological exploration and subsurface geological exploration
3. Geological exploration according to the characteristics of the deposit
4. Facilities necessary to guarantee exploration
5. Evaluation, control and quality of exploration results

2. DIDACTIC UNIT 2. APPROACH AND PLANNING STRATEGIES IN MINING

1. Before addressing the mining planning process

2. The geological resources and the characteristics of the deposit
3. Recoverable reserves. the basis for every mining plan
4. The operational and mining scale of exploitation and its influence on mining planning
5. Factors to take into account when preparing a mine plan

3. DIDACTIC UNIT 3. DESIGN OF THE MINING EXPLORATION MODEL

1. Geological exploration plan
2. Geological exploration for research, evaluation, grade control and production
3. Equipment and machinery required for the execution of the exploration plan
4. Execution, monitoring and control of the exploration plan
5. Results of the geological exploration plan

4. DIDACTIC UNIT 4. DESIGN OF RESOURCES AND FACILITIES FOR MINING EXPLOITATION

1. Mining systems
2. mining development
3. Basic mine services
4. Design for surface mining operations
5. Costs associated with surface mining operations

MODULE 3. EXPLOITATION, PRODUCTION AND PROCESSING TECHNOLOGIES OF MINING PRODUCTS

1. DIDACTIC UNIT 1. SCENARIOS AND TECHNIQUES IN MINING PRODUCTION

1. Criteria for selecting the type of mine
2. Mine development
3. Underground exploitation methods
4. Open pit mining methods
5. Other methods

2. DIDACTIC UNIT 2. FACILITIES FOR THE PROCESSING OF MINERAL RESOURCES

1. Infrastructure and/or technologies for startup
2. Infrastructure and/or technologies for loading and hauling
3. Infrastructure and/or technologies for classification, crushing and grinding
4. Infrastructure and/or technologies for concentration and refining
5. Infrastructure and/or technologies for transportation

3. DIDACTIC UNIT 3. PROCESSES, TECHNIQUES AND TOOLS IN MINING DRILLING AND BLASTING (BLASTING)

1. Drilling methods
2. Drilling technology
3. Explosives technology for blasting in "open pit" and underground mining
4. Technology of accessories for blasting (blasting) in "open pit" and underground mining
5. Processes and technologies related to alterations and security

4. DIDACTIC UNIT 4. CUTTING-EDGE TECHNOLOGY IN MINING EXPLOITATION

1. Technologies aimed at improving the extraction of mineral resources
2. Technologies aimed at improving the transformation of mineral resources

3. Technologies aimed at the recovery of mineral resources from "mining waste"
4. Technologies to minimize environmental, social and labor impacts in the mining industry
5. Technologies to make unconventional mining profitable

MODULE 4. SUPPLY CHAIN MANAGEMENT. OPERATION AND MAINTENANCE OF MINES

1. DIDACTIC UNIT 1. CONTROL OF PRODUCTION AND MINERAL RECOVERY

1. Planning and production control in mining
2. Planning and control cases
3. Instrumentation and control systems in mineral processing
4. Mineral loss and recovery
5. Mining dilution and recovery

2. DIDACTIC UNIT 2. MAINTENANCE OF MOBILE AND STATIONARY EQUIPMENT

1. Introduction to maintenance management
2. Maintenance management techniques
3. Maintenance management in mining
4. Maintenance planning
5. Maintenance control

3. DIDACTIC UNIT 3. MINING PRODUCTS TRANSPORTATION SYSTEM

1. Logistics and transportation in mining
2. Transport systems in mines
3. Selection of transport systems
4. Loading and Transportation Cycle Considerations
5. Improvements in cargo transportation in mining

4. DIDACTIC UNIT 4. SUPPLY MANAGEMENT, INVENTORY AND MATERIALS HANDLING

1. Logistics and supply in mining
2. Inventory management
3. Supply management
4. Transit and material handling
5. Warehouse management

MODULE 5. MODULE ON NATIONAL AND INTERNATIONAL MARKETING SYSTEMS IN MINING

1. DIDACTIC UNIT 1. PRODUCTION CHAINS OF THE MINING SECTOR

1. Glossary of basic mining terms
2. The production process and products for marketing
3. Stages of the production chain
4. Analysis of production chains and associated costs
5. Production and sale of minerals

2. DIDACTIC UNIT 2. GLOBAL MINERAL MARKET. A KEY SECTOR

1. The supply and demand of minerals in the world

2. The stock market, prices and quotes of minerals
3. Key minerals
4. Risks and DIDACTIC OPPORTUNITY of the mineral market
5. Prospective of the national and international mining market, characterization and analysis

3. DIDACTIC UNIT 3. THE MINERAL MARKETING PROCESS

1. Basic marketing concepts and elements
2. The commercialization of metallic and non-metallic minerals
3. Mineral marketing systems
4. Control of marketing processes in mining
5. Supply chain management in mineral marketing

4. DIDACTIC UNIT 4. MINERALS AND ECONOMIC DEVELOPMENT

1. Mining. impact on national and international economic development
2. Economic feasibility for the commercialization of minerals
3. The business plan for the commercialization of minerals
4. Analysis and statistical models in mineral marketing
5. Innovative business strategies in the commercialization of minerals

MODULE 6. INTEGRATED MANAGEMENT SYSTEMS IN MINING OPERATIONS

1. DIDACTIC UNIT 1. QUALITY MANAGEMENT SYSTEM (QMS) ISO 9001

1. Conceptual framework and principles of QMS
2. Standardization and Certification Process of Management Systems (SG)
3. Process Approach in the SG and PHVA cycle
4. Documentation of the SG and the SL Annex
5. Analysis and Interpretation of the Requirements of the ISO 9001 Standard

2. DIDACTIC UNIT 2. ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) ISO 14001 AND SOCIAL RESPONSIBILITY (26001)

1. Conceptual framework and principles of EMS
2. Importance of identifying legal and other requirements
3. Determination of Environmental Aspects and Impacts
4. Analysis and Interpretation of the Requirements of the ISO 14001 Standard
5. Integration of Social Responsibility based on ISO 26000

3. DIDACTIC UNIT 3. WORKPLACE HEALTH AND SAFETY MANAGEMENT SYSTEM (SST) ISO 45001

1. Conceptual framework and basis of OSH management systems
2. Hazard Identification and Risk Assessment (IPER)
3. Determination of legal and other applicable requirements
4. Emergency Preparedness and Response
5. Analysis and Interpretation of the Requirements of the ISO 45001 Standard

4. DIDACTIC UNIT 4. MANAGEMENT SYSTEMS INTEGRATION TECHNIQUES

1. Analysis of the common requirements of the systems to be integrated
2. Interpretation and application of integration methodologies

3. Initial diagnosis of compliance with a GIS
4. Development of a GIS Implementation Plan
5. Implementation and monitoring of the GIS plan until its certification

MODULE 7. GOVERNANCE AND BUSINESS MANAGEMENT FRAMEWORK IN THE MINING INDUSTRY

1. DIDACTIC UNIT 1. GOVERNING BODIES AND SYSTEM OF FINANCIAL ADMINISTRATIVE AUTHORITY LEVELS

1. Corporate governance fundamentals
2. Corporate Governance and life cycle of mining investment
3. Levels of authority and decision making
4. Decision mechanics in the gate model
5. Strategic management of the mining business

2. DIDACTIC UNIT 2. ENVIRONMENT MANAGEMENT AND SOCIO-ENVIRONMENTAL FACTORS IN THE MINING BUSINESS

1. Mining company environment
2. Socio-environmental factors in the mining business
3. Mining and development
4. Socio-environmental evaluation of the mining project
5. Mining project cycle and socio-environmental management

3. DIDACTIC UNIT 3. HUMAN TALENT MANAGEMENT IN MINING

1. The human factor in the mining industry
2. Human talent management
3. Human talent management processes
4. Tools and techniques in human talent management
5. Leadership and team development

4. DIDACTIC UNIT 4. CONTROL AND MONITORING OF MANAGEMENT IN THE MINING BUSINESS

1. Comprehensive management for monitoring and control of mining
2. Supervision of mining management
3. Management Indicators applied to mining
4. Business Intelligence applied to mining
5. The future of mining with artificial intelligence

MODULE 8. FINANCIAL MANAGEMENT AND DECISION MAKING IN THE MINING BUSINESS

1. DIDACTIC UNIT 1. FINANCE FOR MINERS

1. The importance of financial management applied to mining
2. The Financial function from the perspective of the mining field
3. The financial statements. Balance Sheet, Income Statement (profit and loss)
4. Performance analysis. Liquidity, solvency, efficiency and profitability
5. Financial ratios and stock market indicators

2. DIDACTIC UNIT 2. FINANCIAL MANAGEMENT OF A MINING COMPANY

1. The mining cycle and its financial alternatives
2. Treasury Management and Investment Decisions
3. Financing Decisions. Short and long term
4. Valuation of companies and mining projects
5. Financial risk management

3. DIDACTIC UNIT 3. THE MINING BUSINESS PLAN

1. Structure of a Business Plan
2. Elements of a Cash Flow
3. Building a Cash Flow
4. Determination of Initial Investment
5. Considerations Feasibility Studies

4. DIDACTIC UNIT 4. FINANCIAL DECISIONS

1. Decision making process
2. Decision making model
3. Determination of Indicators for Financial Decision Making
4. Economic and financial evaluation of projects
5. Practical case. Business Plan Evaluation

MODULE 9. MINING PROJECT MANAGEMENT

MODULE 10. TFM. MASTER MINING

Qualification

University Degree in Master of Lifelong Training in Management and Systems in the Mining Industry issued by the Antonio de Nebrija University with 60 ECTS University Credits. Teachings not leading to obtaining an official qualification

Objectives

- • Lead the strategic direction of the value chain in the mining sector, from the initial phase to industrial use. • Formulate approach and planning strategies for mining projects, incorporating the exploration and geological evaluation of deposits. • Analyze critical factors and global trends in the mining business to inform decision making. • Apply the international regulatory framework and relevant legislation in the formulation of mining and infrastructure projects. • Manage the characterization of the mining industry at a global level, identifying its impacts and development opportunities. • Prepare design plans for mining infrastructure, based on rigorous strategic planning and geological evaluation. • Implement strategic decisions that promote process optimization and industrial use in mining.

What does it prepare you for?

This program prepares you to lead mining strategic management and systems in the industry with a global vision. You will develop the ability to design and implement mining approach and planning strategies, from the exploration and geological evaluation of the deposit to the design of resources and facilities. You will master the implementation of advanced tools, procedures and techniques in mining production, both underground and open pit. You will evaluate the impact of operational and strategic decisions, ensuring the optimization of the mining value chain. You will integrate the international context of the business and applicable legislation, allowing you to make informed decisions that drive the development and efficiency of large-scale mining operations. The Master in Management and Systems in the Mining Industry trains engineering and management professionals to manage complex mining projects, achieving optimization of the global value chain.

Who is it addressed to?

Aimed at professionals in mining, civil, geology, metallurgical, electrical, automation, instrumentation and control, mechanical, environmental, industrial maintenance, and mining operations management. If you work in the sector and are looking to strengthen your skills in the strategic and operational management of the mining value chain, this program is for you. It is designed for those who want to optimize high and mid-level planning, improving resource management in the industry. If your concern is to lead the transformation and development of mining projects on a global scale, you will find here the necessary tools and vision to boost your professional career.

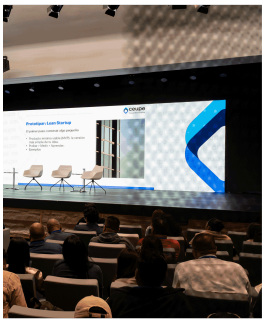
Official Character

This training is not included within the scope of official regulated training (Early Childhood Education, Primary Education, Secondary Education, Official Vocational Training FP, Baccalaureate, University Degree, Master University Officer and Doctorate). It is therefore a complementary and/or specialization training, aimed at the acquisition of certain competencies, skills or aptitudes of a professional nature, which can be assessed as merit in job boards and/or competitive examinations, always within the section of Complementary Training and/or Continuous Training. It is always essential to review the specific grading requirements of the specific public job boards to which we wish to apply.

Professional Outings

- Specialization in mining industry systems and management will position you to assume highly responsible roles in the sector. You will be able to direct the strategic management of mining projects, from the exploration and geological evaluation of the deposit to the design of infrastructure. You will become a reference in the optimization of the value chain, leading multidisciplinary teams. You will assume positions as Director of Mining Operations, where you will oversee the implementation of production tools and techniques, both underground and open pit. You will be a Geological Planning Manager, designing approach strategies and resource development. You will also be able to serve as a Senior Consultant in Mining Project Management, providing a global and strategic vision for making critical decisions in the industry. Your profile will be key in directing technical and administrative management, promoting efficiency and sustainable development of the sector at a global level.







Live Madrid

Live the International Week

As an additional complement to your training, you can be part of the SIM: Week International in Madrid. A unique meeting that brings together students from all over the world. For seven days you can live an academic and cultural experience in the heart of Europe, culminating with the graduation ceremony in Madrid.

- Conferences and workshops with international experts
- Visits to companies and reference organizations
- Networking with students from different countries
- Cultural activities and discovery of Madrid
- graduation ceremony

Structural

Structuralia is a leading educational institution in postgraduate and highly specialized online training, focused on the fields of engineering, architecture, construction, energy, technology and digital transformation.

Founded in 2001 with a strong industrial DNA, the result of collaboration between large companies in the sector and the Universitat Politècnica de Catalunya (UPC), for more than 25 years we have accompanied technical professionals in their academic and professional development through practical, flexible training aligned with the reality of the labor market.

Our training proposal connects advanced technical knowledge, real employability and international projection, acting as key support in the professional evolution of those seeking to specialize, grow professionally and generate impact in their sector, with a firm commitment to the democratization of access to technical excellence.



+350.000

Students have gone through our virtual classrooms



+20 years

Experience in the training sector



5 stars

QS ranking in online education

EDUCA EDTECH
Group

Educa Edtech GROUP

When you enroll in a course or master's degree, you will get a free subscription to MyLXP while your training lasts. You will have access to more than 400 key courses (soft skills, languages, digital skills, etc.) and other surprises. Sign up and see how MyLXP improves your learning.

EDUCA LXP Methodology

The comprehensive tailored online education experience

EDUCA LXP is more than a methodology, it is a completely educational experience personalized thanks to all the possibilities offered by artificial intelligence. Now the content adapts to you, your needs and preferences, while offering you access to updated and practical content that really makes a difference in the labor market.

Flexibility

100% online learning adapted to your schedule: study from any device wherever, whenever and however you want.

Personalization

Contents and training itineraries adapted to your needs, thanks to AI.

Innovation

Constantly evolving technological developments driven by AI through the Learning Experience Platform.

Artificial intelligence

Discover PHIA, your learning assistant that will help you every step of the way.

Teaching support

Human empathy and academic guidance from a specialized teaching team.

Educational Experience

Didactic approach oriented to work by competencies, which favors practical and meaningful learning.

MY LXP

When you enroll in a course or master's degree, you will get a free subscription to MyLXP while your training lasts

You will have access to more than 400 key courses (soft skills, languages, competencies digital, etc.) and other surprises. Sign up and see how MyLXP improves your learning.

Meet PHIA, your personalized learning assistant

Use all the possibilities of artificial intelligence to get the most out of it match to your training

EDUCA EDTECH Group leads the digital revolution in education, promoting the continuous learning and technological transformation. The group is made up of recognized training institutions and its mission is to democratize access to education, promote the transfer of knowledge, technological development and research.

With the experience accumulated over more than 20 years, we have perfected our learning platform EDUCA LXP (Learning Experience Platform), the basis of our educational methodology, which provides students with online training practical and meaningful.



Discover all the payment facilities

We adapt to all international payment methods.

VISA · maestro · Pay · Pay · amazon pay · bizum · PayPal · CMR Falabella · OXXO · mercado pago · Diners Club INTERNATIONAL · DISCOVER · Protección al Comprador · CONFIANZA ONLINE

Funding and scholarships

Finance your course or master's degree and enjoy the available scholarships. Contact our expert team to know which one best suits your profile.

25%
Alumni Scholarship

15%
Scholarship recommended

20%
Functional Diversity Scholarship

20%
Unemployment scholarship

15%
GROUP Scholarship

20%
Scholarship for Professionals, Healthcare, members

15%
Entrepreneurship Scholarship

20%
Large Family Scholarship