

ENEB | Empowering the best leaders

Academic Brochure



European Business School of Barcelona

In collaboration with:



Cum Laude Award 2023:



Welcome to ENEB

The World's Leading Business School

We are dedicated to transforming lives through high-quality education. Recognized as the #1 business school by Innovatec for our technological innovation, we offer a dynamic and engaging learning environment designed to equip you with the skills to succeed in today's competitive world.



Why ENEB?

ENEB - European Business School of Barcelona stands out as a leading institution in online education specializing in master's and postgraduate programs designed to boost your career on a global scale. With a strong international presence and courses offered in Spanish, English, and Portuguese, ENEB positions itself as the perfect choice for those seeking educational excellence without borders.

All educational programs offered by ENEB grant University Certification as they are endorsed and certified by the Isabel I University, thus validating the quality and recognition of your education internationally. Upon completing your studies, you will be eligible to receive ECTS (European Credit Transfer System).

MAIN PARTNERS



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Isabel I



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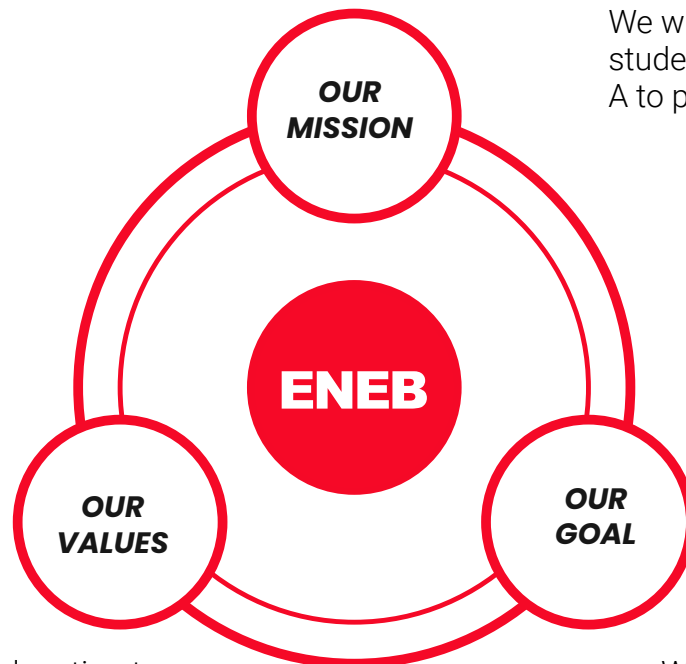
Instituto
Europeo
de Posgrado





You are our mission, our values and our goals

Our mission at ENEB is to transform your life, empowering you to choose your own path and dedicate your time to what you are most passionate about, with no limits to achieving your goals. We envision ourselves as the gateway to your life objectives, offering accessible, top-quality education for everyone. We are committed to ensuring no talent is left behind and to making a positive impact on society. With over 19,000 students annually, we feel a profound responsibility to make a real difference.



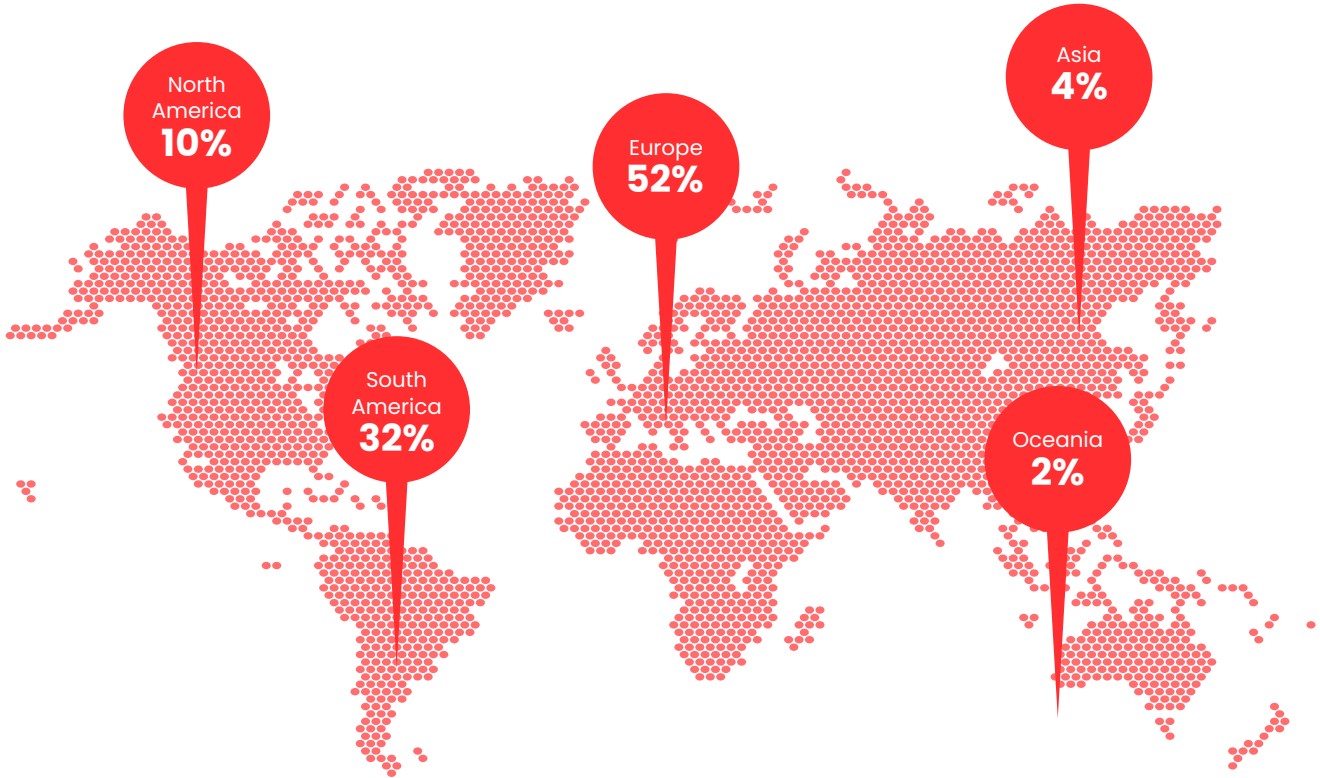
We want to transform our students' lives, from point A to point E.

We aim to provide education to everyone who truly desires it. We strive to break barriers because we believe that top-tier education should be accessible to all, not just a select few.

With over 19,000 students each year, we feel a profound responsibility to make a meaningful impact on society.

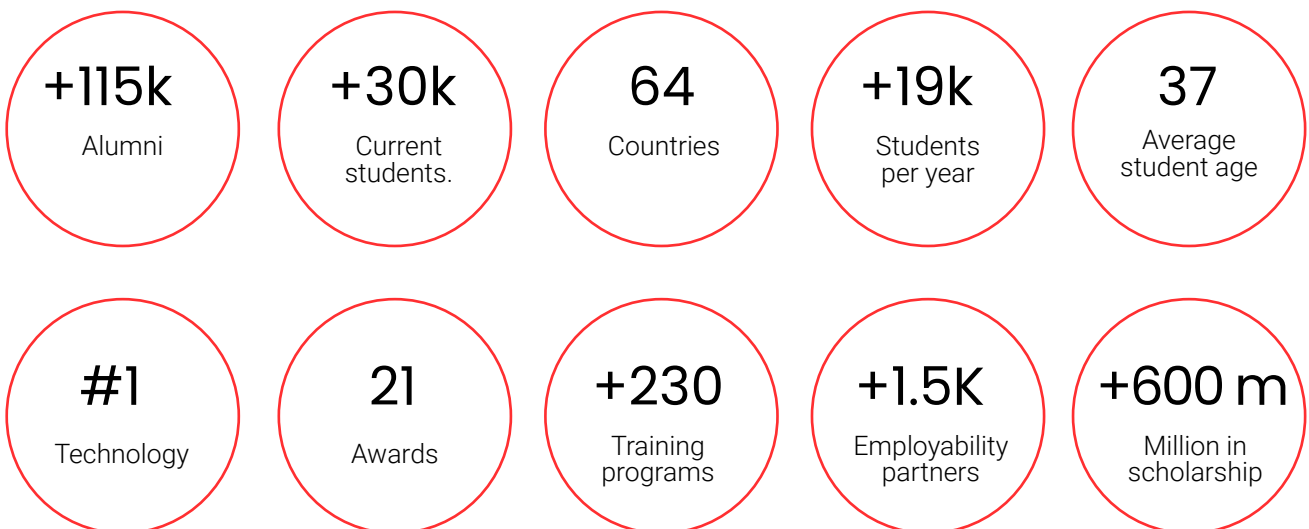
ENEB in the world

At ENEB, each country represents not just a new territory, but a fresh opportunity to transform the world. Over 150,000 students across 125 countries have wisely chosen ENEB to shape their future and make a global impact.



ENEB in Numbers

Numbers are not just figures; they are the result of our relentless effort and dedication. At ENEB, our impressive stats reflect our commitment to excellence and our global impact on education and transformation.



Accreditations

All the certificates of our training programmes are issued by ENEB Business School and certified by the Universidad Isabel I, which belongs to the European Higher Education Area guaranteeing the homogeneity and quality of the training. ENEB master's and postgraduate programs have the highest recognitions, approvals and homologations that guarantee the educational quality of their content. They are highly valued professional trainings in the field of each of the different areas of knowledge. The homologations, accreditations, memberships, certifications, registrations and recognitions of ENEB are the following:

 <p>Universidad Isabel I</p> <p>All our training programmes are certified by Universidad Isabel I.</p>	 <p>Collaboration with IEE, for validations in USA and Canada.</p>	 <p>Member of the Spanish Confederation of Private Centres and Academies.</p>
 <p>Member of the Spanish National Association of e-Learning and Distance Learning Centres</p>	 <p>Collaborating Centre of the Trinity College London.</p>	 <p>Quality and excellence certification with the highest score issued by the European Foundation for Quality Management.</p>
 <p>Certificate of educational excellence established</p>	 <p>Member of the Barcelona Chamber of Commerce</p>	 <p>Best business school rated by its students.</p>
 <p>Registered trademark with the number 3,543,757 within class 41 of Education and Training.</p>	 <p>Associated to the Latin American Council of Management Schools</p>	 <p>Asociación española de escuelas de negocios</p> <p>Associated with the Asociación Española de Escuelas de Negocios.</p>

Remote learning

ENEB's training programs are 100% online and includes manuals, daily and voluntary live classes in the ENEB Metaverse, multimedia resources, forums, and debates within the ENEB community, as well as tutoring from Monday to Sunday.



Evaluation is done through the presentation of a final assignment per subject, after passing self-assessments. These self-assessments do not affect your final grade but help you measure your progress in learning. Final assignments are evaluated and corrected by the team of tutors and professors. There are no final tests or theoretical exams.

Flexibility is not only reflected in the delivery of assignments but also in the adaptability of the program to your needs. You can follow the order of subjects that best suits your time, needs, or concerns.

ENEB has a complete team of tutors available 7 days a week to guide and advise you on practical cases, ensuring your success in each subject.

The image shows a red rounded rectangle containing four white icons, each with a label below it. The icons are: a clock with a circular arrow (Flexible), three people with a hand (Customised), an open padlock (Accessible), and a laptop with a graduation cap (Online).

- Flexible
- Customised
- Accessible
- Online



Our Methodology

At ENEB, you learn by making decisions through Harvard-backed case studies, guided by 200+ active professionals, all within our immersive Metaverse campus. Rather than focusing on memorizing information, we place the emphasis on preparing you for real-world business decisions.



SPECIAL PROGRAMS

“The Food Truck Challenge”

Simulator in which you will manage a successful food truck in the city of Boomtown.

You will work in teams to make decisions, after each decision there will be a debriefing and the decisions made and results obtained by each team will be discussed.

With content from Harvard Business Publishing Education.





Live Classes in the Metaverse

Our synchronous live classes are held from Monday to Thursday through the ENEB Metaverse (NUBI). These classes feature the participation of experts in various educational areas. The schedule of classes may vary depending on the availability of speakers, but you will always have access to the updated calendar several weeks in advance.

Although attendance at these classes is not mandatory, they are highly recommended as they offer an interactive and practical experience on the most relevant topics of the business world in all its dimensions.

If you are unable to attend a live class, do not worry. All sessions are recorded and available on the virtual campus shortly after they take place, so you can access them at any time that suits you.

Flexible Learning

24/365 Access

Study at your own pace with our flexible 24/365 methodology. Whether you are a busy professional or managing other commitments, our programs are designed to fit into your life. You can start and complete your studies at your convenience, ensuring a stress-free and adaptable learning experience.

Self-Assessment and Practical Assignments

Evaluation is done through the presentation of final assignments per subject, following self-assessments that help you measure your progress. Our flexible approach allows you to follow the order of subjects that best suits your time and needs.

Calendar

All our Masters, Management Development Programs and Advanced Courses have a flexible start date, i.e. they begin when you wish and inform us. The duration of each of them will depend on the number of credits, ranging from 1 month for the Higher Education Courses, 5 months for the Executive Courses, 9 months for the Masters, 12 months for the Double Masters and 14 months for the Global MBA.

“

Thanks to our
7/24
Method

we will answer all your questions and doubts every day of the year through the Virtual Campus.



What we offer:

- Welcome sessions
- Live classes from Monday to Thursday in our NUBI metaverse with active professionals
- Academic Q&A with our Secretary team in the metaverse
- Possibility of internships in companies
- Partnerships with other schools and businesses
- Registration in our job bank
- Networking opportunities and access to the ENEB Community
- Student card



Class President

As part of ENEB's commitment and excellence to students around the world, all programs have Class Presidents who not only are primary guides and supporters within the institution, but also key figures in fostering a robust networking network designed to expand your professional and academic opportunities.

All students are invited to connect with them to stay abreast of the latest developments and opportunities in our academic community. These leaders will offer you valuable resources and strategic advice to maximize your potential for employability and academic success.

Connect, collaborate and grow with us!



Saqib Achakzai

MBA

Senior Manager at Deloitte in London, he is a chartered accountant with more than fifteen years of experience in financial services. His experience includes business transformation, regulatory compliance and financial audits for clients in the UK, US and Middle East.



Richard Overton

MBA + Master in Project Management

Chief Engineer with over 29 years of manufacturing and business management experience. Specialized in operational efficiency, safety standards and team leadership. Expert in methodologies such as FMECA, DMAIC, 5S and TPM. Known for driving efficiency and leading goal-focused teams.



Roner Chichirita

MBA + Master in Big Data and Business Intelligence

A nurse from the Philippines working in a major German hospital, he is pursuing an MBA and a master's degree in Big Data and Business Intelligence at ENEB. His goal as Class President is to improve his leadership skills and help students. In addition, he works as a tax advisor for the Filipino community in Hamburg and enjoys building IKEA furniture and creating websites as a hobby.



Steven Poole

MBA + Master in Logistics

Steven Poole is a recognized leader in the Australian rail industry with more than 20 years of experience. He is currently a principal investigator at Australia's largest rail operator, where he has achieved notable reductions in workplace safety incidents and injuries, as well as significant improvements in staff performance and management.



Samir Bouazzi

MBA + Master in Team Management

An experienced IT, sales and business development professional, he holds a degree in Computer Science from Tunisia. He has managed projects on all continents and currently works as a Section Supervisor at Darwish Holding in Qatar, driving sales growth and fostering team excellence. His commitment to customer satisfaction, innovative strategies and team development make him a valuable professional to be Class President.



What do we expect from students

Success is the result of constant effort. There are no shortcuts to excellence. Dedicate yourself fully to each task and project, and the results will speak for themselves.



-  Active Participation
-  Visible Presence
-  Maximize Opportunities
-  Perseverance
-  Community Creation
-  Active Networking
-  Exemplary Leadership
-  Constant Effort

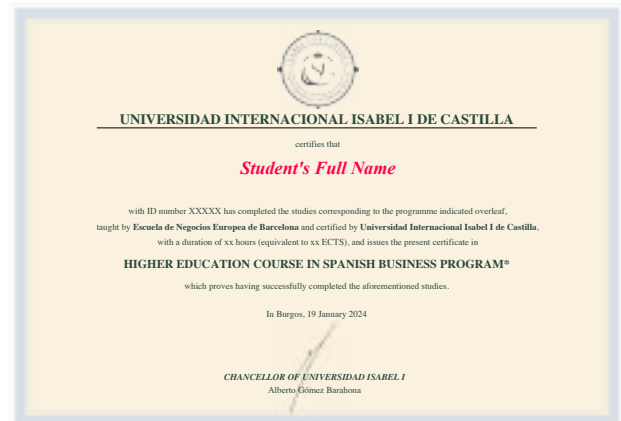
"I couldn't be happier with my studies at ENEB. The online platform includes current content applicable to real-life scenarios, and the quality of the master's degree exceeded all my expectations."



"I'm impressed with the professionalism and dedication of the entire team of the school. From faculty members to administrative staff, every interaction and aspect of my experience has been excellent."

Certifications

Here is an example of the certificates by ENEB and the University Isabel I that may be issued depending on your program of study.



Certificate of completion



Internship program

ENEB Business School is recognised by the most prestigious companies in different sectors. Its training programs, adapted to the current reality of the labour market, will allow you to get on perfectly in any company or organization and to develop a promising career. To make that possible, the school has an agreement with renowned business firms and an employment program where students can access more than 14,000 national and international job offers.

In its pursuit to promote the labour insertion of the students, ENEB Business School, among its free services, offers the possibility of undertaking internships in companies as a complement to their training plan. The objective of this internship, established through a Private Collaboration Agreement between the school and the company, is to allow training in work centres that reproduce the usual conditions of the business environment as part of their training plan.

We provide effective solutions to the growing training needs requested by companies for their future employees. We have an avant-garde research department to update and adapt new trends to the current market as well as a networking space for the meeting of students, managers, professionals, academic experts and entrepreneurs who want to exchange experiences and opinions. Below are some of the companies and organizations where our internships take place:



International character

In addition, all the students focused on international business, business sciences, management, business administration and management, can apply for an international internship through our partners Worldwide Internships and Pic-Management in the United States, Mexico, Dominican Republic, Spain, France, Thailand, China, Malaysia, United Arab Emirates and New Zealand, among others.




Job Opportunities

ENEB Business School is recognized by the most prestigious companies in different sectors. Its training programs, adapted to the current reality of the working world, allow students to grow professionally and climb their career ladder in any company.

To make this possible, ENEB Business School has an agreement with major business firms and employment exchanges with more than 14,000 offers available to its students within the business environment. Registration is optional, and we maintain the strictest confidentiality according to the Personal Data Protection Law in compliance with the European Regulation of Data Protection RGPD 2016/679 and RD of development 1720/2007.

Our team will advise our students on the adaptation of their curriculum and cover letters to ensure their employability in selection processes.



Scholarships and grants

ENEB has limited places available for each of the scholarships aimed at all Master's Degree and Management Development Program students who meet the following requirements:

Direct Scholarship: Without requirements or limitations in each enrollment period. Get your Direct Scholarship now without administrative procedures.

Scholarship for Academic Excellence: Intended for those students whose academic and professional qualifications have a profile of excellence.

Entrepreneurial Talent Scholarship: Designed for all those entrepreneurs who wish to study a Master's or Postgraduate degree in order to apply it to their professional career.

Women and Equality Scholarship: Designed for female candidates who want to grow professionally and achieve the highest level of education. In ENEB, we are committed to gender equality and we encourage woman's integration into the workforce..

Management Scholarship: Intended for all those professionals whose roles of responsibility requires them to continually grow and evolve..

Corporate Scholarship: Intended for all those professionals who want to boost their career and opt for higher positions.

Scholarship for self-employed professionals: Intended for self-employed professional who wish to pursue a Master's or Postgraduate degree to gain an in-depth knowledge of their sector or to acquire the necessary skills to grow their business.

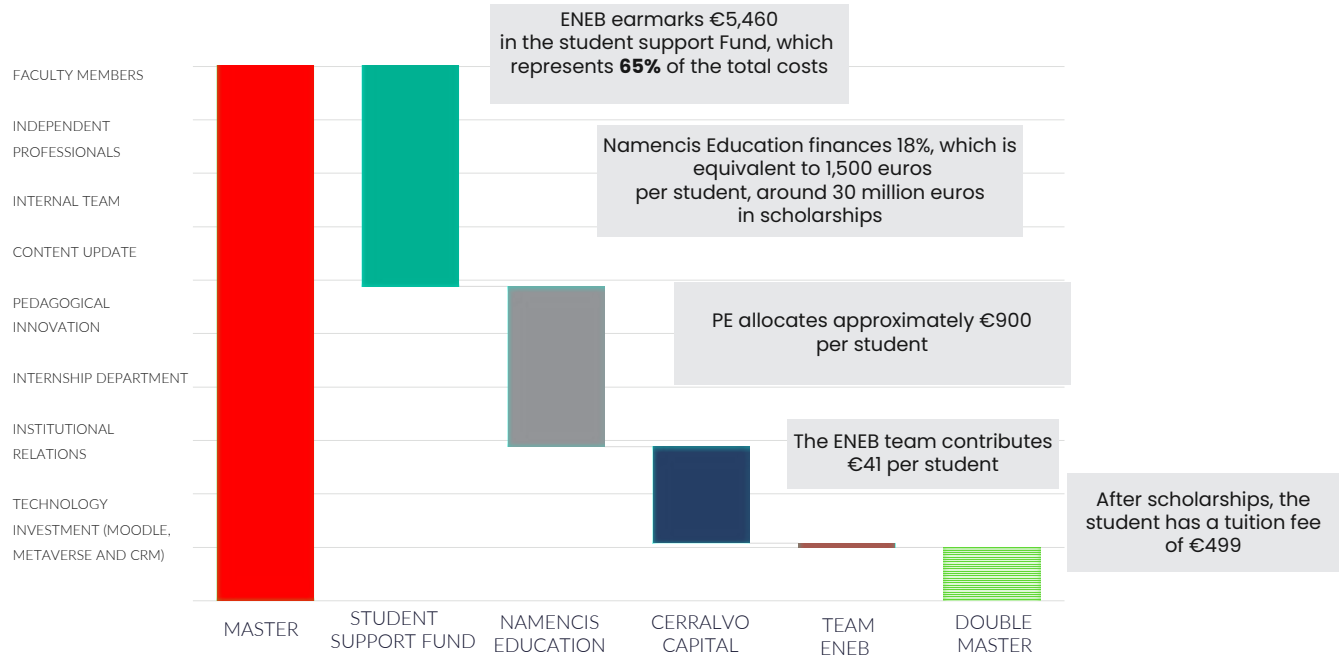
SMEs Scholarship: Designed for entrepreneurs who wish to increase their knowledge to contribute to the growth of their company.

Scholarship for the unemployed: Intended for all those who wish to pursue further studies in order to re-enter the job market.

Geographical Mobility Scholarship: Intended for all applicants who wish to study from anywhere in the world and thus, acquire a global view of the business world.

We are committed to making education accessible to everyone

At ENEB, we are dedicated to democratizing education through exceptional affordability and quality. Our commitment drives us to invest in creating opportunities for every student to thrive and excel, regardless of financial constraints.



“ENEB not only offered me the chance to complete my master’s degree at an unbeatable price but also provided the flexibility I needed to achieve my goals. This experience has truly transformed my life, opening doors to new opportunities and shaping my future in profound ways.”

“I found everything I needed at ENEB: quality content in a format that allowed me to balance work, personal life and study, and at a price I could afford.”





**MASTER IN BIG DATA AND
BUSINESS INTELLIGENCE
+ MASTER IN AI FOR
BUSINESS**

INTRODUCTION

The Master in Big Data and Business Intelligence + Master in AI for Business is designed to provide professionals with comprehensive training in data analysis, strategic decision-making, and the application of Artificial Intelligence (AI) in the business environment. Throughout the program, students will develop advanced skills in the use of data analysis tools, data mining, machine learning, business intelligence, and project leadership, while also acquiring practical skills to integrate AI solutions in key areas such as finance, marketing, human resources, and operations.

This program combines a technical and practical approach, preparing students to lead digital transformation within organizations through the use of AI and the analysis of large volumes of data. Additionally, the program focuses on both technical skills and soft skills, essential for effective communication and teamwork in the modern business context.

Choose to train at ENEB, one of the most prominent distance business schools in Europe, allowing you to train at the highest level from anywhere, with daily support from all professors and tutors.

THREE DIPLOMAS

Upon completion of your studies, you will receive three diplomas issued by the European Business School of Barcelona, endorsed and certified by the University of Isabel I:

- Master in Big Data and Business Intelligence + Master in AI for Business
- Diploma of Specialization in Innovation and Project Management
- Business Spanish Program Certificate

All our training programs come with an optional Business Spanish course, which will enable you to navigate an international work environment. If you choose not to take it, you will receive a double certificate.

WHO IS IT FOR?

The Master in Big Data and Business Intelligence + Master in AI for Business is aimed at:

- IT professionals and computer scientists who wish to specialize in big data analysis and data-driven decision-making.
- Business professionals who seek to enhance their skills in data analysis and strategic decision-making based on data.
- Engineers, mathematicians, and statisticians who wish to specialize in data analysis and business decision-making.
- University graduates from any discipline who wish to acquire skills in data analysis and business decision-making.

- Entrepreneurs interested in starting a business in the areas of Big Data, Business Intelligence, or in applying AI to improve business efficiency and innovation.

OBJECTIVES

The curriculum of the Master in Big Data and Business Intelligence + Master in AI for Business aims to:

- Develop advanced skills in data analysis, data mining, and machine learning.
- Master the use of data analysis and programming tools.
- Learn business intelligence techniques and strategic decision-making.
- Teach how to apply AI in the day-to-day operations of a business, improving processes and optimizing resources.
- Acquire leadership and project management skills.
- Develop communication and teamwork skills.
- Prepare students to lead digital transformation processes within their organizations.

CAREER OPPORTUNITIES

- **Applied AI Specialist:** Responsible for implementing AI solutions in areas such as finance, marketing, HR, or operations.
- **Data Analyst:** In charge of analyzing and interpreting large datasets to extract valuable information for the business.
- **Digital Transformation Consultant:** Expert in guiding companies in the adoption of new technologies, including AI, to improve their competitiveness.
- **E-commerce Manager:** Responsible for managing and optimizing online sales platforms, using AI and data analysis to enhance user experience and sales.
- **Business Intelligence Analyst:** Responsible for collecting, analyzing, and presenting business data to assist in strategic decision-making.
- **Big Data Architect:** Responsible for designing and implementing Big Data solutions for managing and analyzing large volumes of data.
- **AI and Big Data Project Leader:** Responsible for planning, coordinating, and supervising AI, Big Data, and Business Intelligence projects to ensure their success and the achievement of objectives.
- **Operations Director with AI:** Specialist in optimizing business operations through the use of AI technologies and automation.

ADMISSION

To be eligible for any of our Master's programs, applicants must meet the following requirements:

- Hold a degree in any field (Bachelor's, Architecture, Higher or Technical Engineering, Licentiate, Diploma, or equivalent).
- University students currently pursuing a degree or equivalent higher education studies.
- Professionals with career prospects in their current positions.

If you do not meet any of the above conditions, please contact the school, and the admissions department will evaluate your specific case.

SECTION 1. STORAGE TECHNOLOGIES FOR BIG DATA

- Topic 1. Apache Hadoop
- Topic 2. The Hadoop Ecosystem
- Topic 3. Apache Spark
- Topic 4. Streaming Technologies
- Topic 5. File systems and platforms for big data in the cloud

SECTION 2. PROJECT MANAGEMENT

- Topic 1. Project management figure
- Topic 2. Team management
- Topic 3. Team management and communication
- Topic 4. Project management

SECTION 3. AGILE METHODOLOGIES

- Topic 1. Product management
- Topic 2. Lean startup
- Topic 3. Agile management

SECTION 4. ARTIFICIAL INTELLIGENCE

- Topic 1. Introduction to data analysis with Python
- Topic 2. Introduction to machine learning
- Topic 3. Supervised machine learning
- Topic 4. Unsupervised machine learning
- Topic 5. Reinforcement learning
- Topic 6. Deep Learning Fundamentals

SECTION 5. DATA MANAGEMENT

- Topic 1. Open data
- Topic 2. Data management
- Topic 3. Data privacy
- Topic 4. Data storage
- Topic 5. Strategy and data

SECTION 6. BUSINESS INTELLIGENCE

- Topic 1. Introduction to business intelligence
- Topic 2. Business intelligence systems
- Topic 3. Design of reports, dashboards and KPIs
- Topic 4. Data sources
- Topic 5. Data quality

SECTION 7. BIG DATA

- Topic 1. Introduction to big data
- Topic 2. Big data in projects
- Topic 3. Agile methodologies
- Topic 4. Artificial Intelligence
- Topic 5. Use cases in industry

SECTION 8. DATABASES

- Topic 1. Database fundamentals
- Topic 2. Database technology
- Topic 3. SQL Practice (MySQL)
- Topic 4. SQL Practice (MySQL)
- Topic 5. NoSQL practice (Hbase)
- Topic 6. Databases for networks
- Topic 7. Databases in the cloud

SECTION 9. DATA ANALYSIS AND INTERPRETATION

- Topic 1. Data representation
- Topic 2. Measurements
- Topic 3. Regression and correlation
- Topic 4. Probability
- Topic 5. Distributions
- Topic 6. Confidence intervals
- Topic 7. Introduction to Hypothesis Testing
- Topic 8. Statistics with R

SECTION 10. PYTHON, CARTO, POWER BI AND GOOGLE DATA STUDIO

- Topic 1. Interpretation of data
- Topic 2. Interactive visualization with Python
- Topic 3. Introduction to Carto
- Topic 4. Microsoft Power BI
- Topic 5. Google Data Studio

SECTION 11. AI FOR BUSINESS

- Topic 1: Introduction to AI
- Topic 2: How to apply AI in your daily life
- Topic 3: AI in the workplace
- Topic 4: AI for finance
- Topic 5: AI for marketing
- Topic 6: AI for human resources
- Topic 7: AI for operations
- Topic 8: Case studies
- Topic 9: The future of AI

SECTION 12. E-COMMERCE

- Topic 1. Online sales
- Topic 2. Web store
- Topic 3. Mobile applications
- Topic 4. From interested lead to buyer
- Topic 5. Web analytics
- Topic 6. User experience
- Topic 7. Digital campaigns
- Topic 8. Mobile payment
- Topic 9. Landing page

SECTION 13. WEB POSITIONING

- Topic 1. How to attract customers
- Topic 2. SEO: Organic Optimization
- Topic 3. SEM: Payment optimization
- Topic 4. Automating sales
- Topic 5. Growth hacking
- Topic 6. Marketing automation
- Topic 7. Psychology in marketing

SECTION 14. DIGITAL TRANSFORMATION

- Topic 1. Business digitalization
- Topic 2. Artificial Intelligence (AI)
- Topic 3. The Internet of Things (IoT)
- Topic 4. Blockchain
- Topic 5. Big Data and Business Intelligence (BI)
- Topic 6. Cloud computing
- Topic 7. Industrial automation and robotics
- Topic 8. Cybersecurity

SECTION 15. MANAGEMENT SKILLS

- Topic 1. Leadership
- Topic 2. Effective communication
- Topic 3. Coaching
- Topic 4. Empowering teams
- Topic 5. Change management

SECTION 16. DECISION MAKING

- Topic 1. Problem definition
- Topic 2. Selection of criteria and techniques
- Topic 3. Development of alternatives
- Topic 4. Analysis
- Topic 5. Decision
- Topic 6. Action plan
- Topic 7. Examples of problems

SECTION 17. BUSINESS PLAN

- Topic 1. Vision, mission and values
- Topic 2. Strategic plan
- Topic 3. Business model
- Topic 4. Strategic analysis
- Topic 5. Monitoring the strategic plan

SECTION 18. OPERATIONS MANAGEMENT

- Topic 1. Business Strategy
- Topic 2. Operations Management
- Topic 3. Demand
- Topic 4. Product development
- Topic 5. Operating systems
- Topic 6. Process planning and management
- Topic 7. Operational planning
- Topic 8. The human factor in operations management

A JOURNEY THROUGH THE SYLLABUS

SECTION 1: STORAGE TECHNOLOGIES FOR BIG DATA

Storage Technologies for Big Data explores the technologies and platforms used for storing and managing large volumes of data. This section covers the principles of data storage, including technologies for Big Data storage, processing, and streaming.

Topic 1: Apache Hadoop

Students will study Apache Hadoop, an open-source framework for processing large data sets across distributed computing environments. The topic covers Hadoop's architecture, components, and applications in Big Data analytics.

Topic 2: The Hadoop Ecosystem

This topic explores the broader Hadoop ecosystem, including tools and technologies that integrate with Hadoop for data processing and analysis, such as Hive, Pig, and HBase.

Topic 3: Apache Spark

Students will learn about Apache Spark, a unified analytics engine for large-scale data processing. The topic covers Spark's core components, including Spark SQL, Spark Streaming, and Spark MLlib.

Topic 4: Streaming Technologies

This topic covers technologies for real-time data processing and streaming, including tools like Apache Kafka and Apache Flink. Students will explore how to handle and analyze data streams as they are generated.

Topic 5: File Systems and Platforms for Big Data in the Cloud

Students will explore cloud-based file systems and platforms for Big Data, including solutions like Amazon S3, Google Cloud Storage, and Microsoft Azure. The topic covers cloud storage options, their benefits, and their integration with Big Data tools.

SECTION 2: PROJECT MANAGEMENT

This section covers the essential skills and techniques needed for effective project management. You will learn how to initiate, plan, execute, and close projects successfully, ensuring that projects meet their objectives on time and within budget. By mastering these concepts, you will be prepared to lead projects and drive results in various business contexts.

Topic 1. Project Management Figure

Explore the role of the project manager and the key responsibilities associated with the position. Learn about the skills required for successful project management, including leadership, communication, and problem-solving.

Topic 2. Team Management

Understand the principles of effective team management. Learn how to build and lead teams, foster collaboration, and resolve conflicts to ensure project success and achieve team goals.

Topic 3. Team Management and Communication

Delve into strategies for managing team dynamics and effective communication. Learn how to facilitate open dialogue, provide constructive feedback, and maintain team cohesion throughout the project lifecycle.

Topic 4. Project Management

Learn the core processes and methodologies of project management. Explore project initiation, planning, execution, monitoring, and closure, along with tools and techniques for managing scope, time, cost, and quality.

SECTION 3: AGILE METHODOLOGIES

Agile methodologies are essential for managing projects in dynamic environments, allowing for flexibility and rapid response to changes. This section covers the principles and practices of agile management, including product management, lean startup, and agile frameworks.

Topic 1: Product management

Learn about agile product management, including techniques for defining product vision, managing product backlogs, and delivering value to customers through iterative development.

Topic 2: Lean startup

Understand the lean startup methodology, which emphasizes building and scaling businesses efficiently by rapidly testing and iterating on ideas to achieve market fit.

Topic 3: Agile management

Explore agile project management frameworks like Scrum and Kanban, including their principles, roles, events, and artefacts, and how to apply them to your projects for improved efficiency and flexibility.

SECTION 4: ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) explores the foundational concepts and advanced techniques used in AI applications. This section covers a range of AI topics from introductory principles to advanced machine learning methods and deep learning techniques.

Topic 1: Introduction to Data Analysis with Python

Students will begin by learning data analysis techniques using Python, focusing on libraries and tools for data manipulation, exploration, and visualization.

Topic 2: Introduction to Machine Learning

This topic introduces the basics of machine learning, covering types of learning (supervised, unsupervised) and fundamental algorithms used to create predictive models from data.

Topic 3: Supervised Machine Learning

Students will explore supervised machine learning techniques, including classification and regression algorithms. The topic covers model training, evaluation, and application to real-world problems.

Topic 4: Unsupervised Machine Learning

The focus here is on unsupervised machine learning methods such as clustering and dimensionality reduction. Students will learn techniques for discovering patterns and structures in unlabelled data.

Topic 5: Reinforcement Learning

Students will study reinforcement learning concepts, including algorithms for training agents to make decisions through trial and error. The topic covers key techniques such as Q-learning and policy gradients.

Topic 6: Deep Learning Fundamentals

This topic provides an introduction to deep learning, covering neural networks, including architectures like convolutional neural networks (CNNs) and recurrent neural networks (RNNs). Students will learn about deep learning frameworks and their applications.

SECTION 5: DATA MANAGEMENT

Data Management encompasses the practices and technologies for collecting, storing, and protecting data to support business operations and strategic decision-making. This section covers key concepts in data management, including open data, data privacy, and developing effective data strategies.

Topic 1: Open Data

Students will explore the concept of open data and its role in fostering transparency, innovation, and public engagement. This topic covers the principles of open data initiatives, the benefits of making data accessible to the public, and the challenges associated with open data management.

Topic 2: Data Management

This topic covers the essential practices for managing data throughout its lifecycle. Students will learn about data collection, storage, organization, and governance strategies, focusing on how to manage data effectively to meet business needs.

Topic 3: Data Privacy

Data privacy is critical for protecting sensitive information. Students will study data privacy laws, regulations, and best practices for ensuring the protection of personal and confidential data. The topic emphasizes the importance of compliance with legal standards and ethical considerations in data management.

Topic 4: Data Storage

This topic covers various data storage solutions, including traditional and cloud-based options. Students will learn about different storage technologies, their applications, and how to choose the best storage solutions for different data management needs.

Topic 5: Strategy and Data

Students will explore how to develop data strategies that align with business objectives. This topic covers methods for leveraging data to support strategic planning, drive decision-making, and achieve organizational goals.

SECTION 6: BUSINESS INTELLIGENCE

This section covers the principles and practices of business intelligence (BI). You will learn about BI systems, data analysis techniques, and how to design reports and dashboards to support business decision-making. These skills are essential for using data to drive strategic business outcomes.

Topic 1. Introduction to Business Intelligence

Explore the concept of business intelligence and its role in organizational decision-making. Learn about BI tools, techniques, and strategies for transforming data into actionable insights.

Topic 2. Business Intelligence Systems

Understand the components of business intelligence systems. Learn about data warehouses, BI platforms, and how to integrate data from various sources to support decision-making.

Topic 3. Design of Reports, Dashboards, and KPIs

Learn how to design effective reports, dashboards, and key performance indicators (KPIs). Explore best practices for visualizing data, tracking performance, and communicating insights to stakeholders.

Topic 4. Data Sources

Explore different sources of data for business intelligence. Learn about internal and external data sources, data collection methods, and how to manage and integrate data for analysis.

Topic 5. Data Quality

Understand the importance of data quality in business intelligence. Learn about data quality dimensions, techniques for ensuring data accuracy, and methods for managing data quality issues.

SECTION 7: BIG DATA

This section introduces you to the concept of big data and its applications in business. You will learn about big data technologies, agile methodologies, and the role of artificial intelligence in analyzing and using big data for strategic decision-making.

Topic 1. Introduction to Big Data

Explore the fundamentals of big data, including its definition, characteristics, and significance. Learn about the technologies and tools used to manage and analyze large data sets.

Topic 2. Big Data in Projects

Understand how to apply big data concepts to project management. Learn about big data tools, techniques, and methodologies for leveraging data to drive project success and achieve project goals.

Topic 3. Agile Methodologies

Learn about agile methodologies and their role in big data projects. Explore agile frameworks, such as Scrum and Kanban, and how to use these methodologies to manage data projects and drive innovation.

Topic 4. Artificial Intelligence

Explore the role of artificial intelligence (AI) in big data analytics. Learn about AI techniques, such as machine learning and natural language processing, and how to apply these techniques to analyze and interpret big data.

Topic 5. Use Cases in Industry

Examine real-world use cases of big data in various industries. Learn about successful applications of big data technologies and strategies for leveraging data to solve industry-specific challenges.

SECTION 8: DATABASES

Databases focuses on the fundamental technologies and practices for managing data storage, retrieval, and manipulation. This section covers both relational and non-relational databases, offering practical experience with SQL and NoSQL technologies.

Topic 1: Database Fundamentals

This topic covers the basics of database systems, including their structures, functions, and roles in data management. Students will learn about relational databases, data models, and the importance of databases in business applications.

Topic 2: Database Technology

Students will explore various database technologies, including relational and NoSQL databases. The focus is on understanding different database types, their architectures, and their applications for managing business data.

Topic 3: SQL Practice (MySQL)

This topic provides practical experience with SQL using MySQL. Students will learn to write SQL queries for data retrieval, manipulation, and management, gaining hands-on skills in working with relational databases.

Topic 4: SQL Practice (MySQL)

Further practice with SQL in MySQL will deepen students' abilities to handle complex queries, optimize performance, and manage database structures for various business applications.

Topic 5: NoSQL Practice (HBase)

Students will explore NoSQL databases, focusing on HBase for managing unstructured data. This topic covers NoSQL database concepts, HBase features, and techniques for performing scalable data queries.

Topic 6: Databases for Networks

This topic examines databases used in network environments, including strategies for managing distributed databases and ensuring data consistency and integrity across networks.

Topic 7: Databases in the Cloud

Students will learn about cloud-based database solutions, focusing on the benefits and challenges of cloud storage for Big Data. The topic covers cloud database platforms, deployment models, and best practices for managing data in the cloud.

SECTION 9: DATA ANALYSIS AND INTERPRETATION

This section covers the principles and techniques of data analysis and interpretation, focusing on data representation, measurements, regression and correlation, probability, distributions, confidence intervals, hypothesis testing, and statistics with R.

Topic 1: Data Representation

Data Representation explores the various methods for representing data. Students will learn about different types of data visualizations, techniques for summarizing data, and best practices for effective data representation.

Topic 2: Measurements

Measurements cover the concepts of statistical measurements. Students will learn about measures of central tendency (mean, median, mode), measures of dispersion (range, variance, standard deviation), and techniques for interpreting statistical data.

Topic 3: Regression and Correlation

Regression and Correlation examine the relationships between variables. Students will learn about linear regression, correlation coefficients, and techniques for modeling and analyzing relationships in data.

Topic 4: Probability

Probability covers the fundamental concepts of probability theory. Students will learn about probability distributions, conditional probability, and techniques for calculating and interpreting probabilities.

Topic 5: Distributions

Distributions explore the different types of probability distributions. Students will learn about normal distribution, binomial distribution, and techniques for analyzing and interpreting distributions in data.

Topic 6: Confidence Intervals

Confidence Intervals examine the concept of confidence intervals in statistics. Students will learn about the calculation and interpretation of confidence intervals, and techniques for estimating population parameters.

Topic 7: Introduction to Hypothesis Testing

Introduction to Hypothesis Testing covers the principles and practices of hypothesis testing. Students will learn about null and alternative hypotheses, test statistics, p-values, and techniques for conducting hypothesis tests.

Topic 8: Statistics with R

Statistics with R explores the use of R for statistical analysis. Students will learn about R programming, statistical functions in R, and techniques for conducting statistical analysis using R.

SECTION 10: PYTHON, CARTO, POWER BI AND GOOGLE DATA STUDIO

Python, Carto, Power BI, and Google Data Studio provide students with practical skills for data analysis and visualization. This section covers tools and techniques for interpreting data, creating visualizations, and generating reports to support business decisions.

Topic 1: Interpretation of Data

This topic teaches methods for analyzing and interpreting data to extract meaningful insights. Students will learn techniques for data exploration, trend analysis, and deriving conclusions from data.

Topic 2: Interactive Visualization with Python

Students will learn to use Python for creating interactive data visualizations. This topic covers Python libraries and tools for developing visualizations that enable users to explore and analyze data interactively.

Topic 3: Introduction to Carto

This topic introduces Carto, a platform for location-based data analysis and visualization. Students will learn to create maps and visualize geographic data using Carto's features and tools.

Topic 4: Microsoft Power BI

Students will explore Microsoft Power BI for data visualization and business reporting. The topic covers creating dashboards, generating reports, and using Power BI features to present business data effectively.

Topic 5: Google Data Studio

This topic covers Google Data Studio for creating reports and visualizations. Students will learn to design interactive reports and dashboards that communicate data insights and support business decisions.

SECTION 11: AI FOR BUSINESS

This course provides a comprehensive overview of how Artificial Intelligence (AI) is reshaping various aspects of the business world. It explores AI's foundational concepts, practical applications, and its impact on different business functions, from finance to human resources. By the end of the

course, participants will have a deep understanding of how to leverage AI to enhance business operations, drive innovation, and stay competitive in a rapidly evolving market.

Topic 1: Introduction to AI

This topic introduces the fundamentals of AI, covering its history, key concepts, and the technological advancements that have driven its development. Participants will learn what AI is, how it works, and why it has become a crucial element in modern business strategies.

Topic 2: How to Apply AI in Your Daily Life

Here, the focus is on the practical application of AI in everyday life. This topic demonstrates how AI tools and technologies can be integrated into daily routines, enhancing personal productivity, decision-making, and convenience through examples like virtual assistants and personalized recommendations.

Topic 3: AI in the Workplace

This topic examines the transformative impact of AI in the workplace. It explores how AI can automate routine tasks, support complex decision-making, and improve overall business efficiency, leading to significant changes in how work is performed across various industries.

Topic 4: AI for Finance

This topic focuses on how Artificial Intelligence enhances fraud detection and cash flow optimization in the financial sector. Participants will learn about AI tools that identify fraud patterns and automate collection and payment processes to improve working capital and the financial health of companies.

Topic 5: AI for Marketing

This topic focuses on the application of AI in marketing. It covers AI-driven techniques for customer targeting, personalization, content creation, and campaign optimization, showing how AI can enhance marketing effectiveness and drive better business outcomes.

Topic 6: AI for Human Resources

Participants will learn about the impact of AI on Human Resources in this topic. The focus is on AI's role in recruitment, employee engagement, talent management, and performance analysis, helping HR professionals streamline their processes and make data-driven decisions.

Topic 7: AI for Operations

This topic highlights how AI optimizes business operations. It includes discussions on AI applications in supply chain management, logistics, inventory management, and production processes, illustrating how businesses can improve efficiency and reduce costs through AI.

Topic 8: Case Studies

This topic provides real-world examples of successful AI implementations across various industries. Participants will analyze these case studies to gain insights into how AI has been effectively applied in different business scenarios, learning from both successes and challenges.

Topic 9: The Future of AI

The course concludes with a look at the future of AI. This topic explores emerging trends, ethical considerations, and the potential long-term impact of AI on the business landscape, preparing participants to navigate the ongoing evolution of AI technologies.

SECTION 12: E-COMMERCE

The E-Commerce section focuses on the strategies and technologies involved in conducting business online. Students will learn about online sales processes, web store management, and methods for converting leads into customers. The section covers both the operational and strategic aspects of e-commerce.

Topic 1: Online Sales

This topic covers the fundamentals of online sales, including setting up an online store, managing product listings, and strategies for increasing online sales. Students will learn about e-commerce platforms and techniques for driving traffic and sales.

Topic 2: Web Store

Students will learn how to design and manage a web store, focusing on the technical and operational aspects of e-commerce websites. This topic includes website development, user interface design, and the management of online transactions.

Topic 3: Mobile Applications

This topic explores the role of mobile applications in e-commerce. Students will learn about mobile app development, user experience design for mobile platforms, and strategies for engaging customers through mobile applications.

Topic 4: From Interested Lead to Buyer

Students will learn strategies for converting leads into paying customers. This topic covers lead generation techniques, nurturing leads, and using sales funnels and CRM systems to manage and close sales.

Topic 5: Web Analytics

This topic introduces web analytics tools and techniques for measuring website performance. Students will learn how to collect, analyze, and interpret web data to inform marketing decisions and optimize online sales strategies.

Topic 6: User Experience

Students will explore best practices for designing a positive user experience on e-commerce sites. This topic covers principles of user experience design, including usability, accessibility, and creating intuitive user interfaces.

Topic 7: Digital Campaigns

This topic covers the creation and management of digital marketing campaigns. Students will learn about campaign planning, execution, and measurement, including strategies for online advertising, email marketing, and social media promotions.

Topic 8: Mobile Payment

Students will learn about mobile payment systems and technologies. This topic covers various mobile payment methods, security considerations, and the integration of payment solutions into e-commerce platforms.

Topic 9: Landing Page

This topic focuses on designing effective landing pages for e-commerce and marketing campaigns. Students will learn about landing page best practices, including layout, content, and call-to-action strategies to maximize conversions.

SECTION 13: WEB POSITIONING

Web positioning, or search engine optimization (SEO), involves strategies to improve a website's visibility on search engines. This section covers techniques for enhancing online presence and attracting customers.

Topic 1: How to Attract Customers

Attracting customers online involves strategies for increasing website traffic and engaging potential customers. This topic covers techniques such as content marketing, search engine optimization, and social media outreach to draw visitors to a website.

Topic 2: SEO: Organic Optimization

Organic optimization focuses on improving a website's ranking in search engine results without paid advertising. This topic explores methods for optimizing website content, structure, and keywords to achieve higher search engine rankings and attract more visitors.

Topic 3: SEM: Payment Optimization

Search engine marketing (SEM) involves using paid advertising to improve a website's visibility. This topic covers strategies for creating effective SEM campaigns, including keyword selection, ad creation, and budget management to achieve marketing objectives.

Topic 4: Automating Sales

Automating sales involves using technology to streamline sales processes. This topic explores tools and techniques for automating tasks such as lead generation, follow-ups, and sales reporting to increase efficiency and drive revenue.

Topic 5: Growth Hacking

Growth hacking is a strategic approach to achieving rapid business growth. This topic covers innovative techniques for scaling a business, including creative marketing strategies, data-driven experiments, and leveraging technology for growth.

Topic 6: Marketing Automation

Marketing automation involves using software to manage marketing tasks and campaigns. This topic explores tools for automating tasks such as email marketing, social media management, and lead nurturing to improve efficiency and effectiveness.

Topic 7: Psychology in Marketing

Psychology in marketing examines how consumer behavior and decision-making processes influence marketing strategies. This topic covers concepts such as consumer motivation, perception, and decision-making biases to develop effective marketing campaigns.

SECTION 14: DIGITAL TRANSFORMATION

This section examines the impact of digital technologies on hospitality and revenue management operations, emphasizing strategies for leveraging digital innovations to enhance customer experiences and operational efficiency.

Topic 1: Business Digitalization

This topic introduces digital transformation strategies for integrating digital technologies into hospitality and revenue management operations. Discussions include digitizing processes, enhancing service delivery through digital platforms, and leveraging data analytics for informed decision-making.

Topic 2: Artificial Intelligence (AI)

Here, you will explore the applications of artificial intelligence (AI) in hospitality and revenue management. Topics include AI-driven customer service enhancements, predictive analytics for demand forecasting, and optimizing operational efficiency through AI-powered solutions.

Topic 3: The Internet of Things (IoT)

This topic examines the Internet of Things (IoT) and its applications in enhancing operational processes within hospitality and revenue management sectors. Topics include IoT-enabled smart devices, data connectivity, and leveraging IoT data for real-time insights and decision-making.

Topic 4: Blockchain

In this topic, you will study blockchain technology and its potential applications in improving transparency and security within hospitality and revenue management operations. Topics include

blockchain-based transaction systems, supply chain management, and enhancing trust and traceability in business processes.

Topic 5: Big Data and Business Intelligence (BI)

Here, you will explore big data analytics and business intelligence (BI) tools for extracting actionable insights from large datasets within hospitality and revenue management sectors. Topics include data-driven decision-making, predictive analytics, and optimizing customer experiences through BI-driven strategies.

Topic 6: Cloud Computing

This topic covers cloud computing solutions and their benefits for hospitality and revenue management operations. Discussions include cloud-based infrastructure, scalability, data storage, and leveraging cloud platforms for flexible and cost-effective IT solutions.

Topic 7: Industrial Automation and Robotics

Here, you will study the applications of industrial automation and robotics in optimizing operational processes within hospitality and revenue management sectors. Topics include robotic process automation (RPA), automation in service delivery, and enhancing efficiency through robotic technologies.

Topic 8: Cybersecurity

This topic examines cybersecurity principles and best practices for protecting digital assets and customer data within hospitality and revenue management operations. Discussions include cybersecurity frameworks, data privacy regulations, and strategies for mitigating cyber threats and vulnerabilities.

SECTION 15: MANAGEMENT SKILLS

This section focuses on developing essential management skills for effective leadership. You will learn about leadership styles, communication techniques, and strategies for managing change and empowering teams. These skills will help you lead teams and drive organizational success.

Topic 1. Leadership

Learn about different leadership styles and their applications. Explore effective leadership practices, including how to inspire, motivate, and guide teams toward achieving organizational goals.

Topic 2. Effective Communication

Understand the principles of effective communication in a management context. Learn how to convey messages clearly, listen actively, and manage conflicts to build strong professional relationships.

Topic 3. Coaching

Explore the role of coaching in employee development. Learn techniques for providing constructive feedback, setting goals, and supporting employees in their personal and professional growth.

Topic 4. Empowering Teams

Learn how to empower teams to achieve high performance. Explore strategies for delegating responsibilities, fostering autonomy, and creating an environment that encourages team members to excel.

Topic 5. Change Management

Understand the principles of change management and how to lead organizational change. Learn about change models, overcoming resistance, and guiding teams through transitions to achieve successful outcomes.

SECTION 16: DECISION MAKING

This section delves into the process of decision making in a business context. You will learn how to define problems, select criteria and techniques, develop alternatives, analyze options, make decisions, and create action plans. Practical examples will enhance your understanding of these concepts.

Topic 1. Problem Definition

Learn how to accurately define and frame problems. Understand the importance of problem definition in the decision-making process and how to identify root causes.

Topic 2. Selection of Criteria and Techniques

Explore the criteria and techniques used in decision making. Learn how to select appropriate criteria and apply decision-making techniques to evaluate options and make informed choices.

Topic 3. Development of Alternatives

Understand how to generate and develop alternative solutions. Learn creative problem-solving techniques and how to evaluate the feasibility of different options.

Topic 4. Analysis

Learn how to analyze alternatives using various tools and techniques. Understand the importance of data analysis, risk assessment, and scenario planning in the decision-making process.

Topic 5. Decision

Explore the process of making decisions based on analysis. Learn about decision-making models, the role of intuition, and how to make decisions under uncertainty.

Topic 6. Action Plan

Learn how to create and implement an action plan. Understand the steps involved in translating decisions into actionable steps, assigning responsibilities, and setting timelines.

Topic 7. Examples of Problems

Examine real-world examples of business problems and the decision-making processes used to address them. Learn from case studies and practical scenarios to apply decision-making concepts effectively.

SECTION 17: BUSINESS PLAN

In this section, you will explore the foundational principles of business strategy, which are essential for guiding a company's long-term direction and success. The focus is on understanding how to define an organization's vision, mission, and values, and how to develop a strategic plan that aligns with these elements. You will learn how to analyze the internal and external environment of a business to craft effective strategies, create a business model that supports the company's objectives, and monitor the implementation of the strategic plan to ensure that goals are met.

Topic 1: Vision, Mission, and Values

This topic covers the essential components of a company's strategic foundation. The vision statement outlines what the company aspires to achieve in the long-term future, serving as a source of inspiration and a guide for strategic decisions. The mission statement defines the company's current purpose, including its core functions and target market. Values are the guiding principles that shape the company's culture and inform decision-making processes.

Topic 2: Strategic Plan

Here, you will learn how to create a comprehensive strategic plan. This involves setting specific, measurable goals and identifying the actions needed to achieve these goals. The strategic plan

includes evaluating the internal strengths and weaknesses of the organization, as well as external opportunities and threats, to develop a structured approach for future growth and success.

Topic 3: Business Model

This topic explores the components of a business model, which explains how a company generates value and earns revenue. You will examine different types of business models, including value propositions, revenue streams, and cost structures, to understand how these elements work together to support the company's strategic objectives.

Topic 4: Strategic Analysis

In this topic, you will study various tools and techniques for assessing a company's internal capabilities and external environment. Methods like SWOT analysis are used to identify strengths, weaknesses, opportunities, and threats, providing insights that inform strategic decisions and planning.

Topic 5: Monitoring the Strategic Plan

This topic focuses on techniques for tracking and evaluating the effectiveness of the strategic plan. You will learn how to set performance metrics, collect and analyze data, and make adjustments to ensure that the strategic goals are being met and that the organization remains on track for success.

SECTION 18: OPERATIONS MANAGEMENT

This section covers the principles and practices essential to managing the operations of a business. You will learn how to optimize processes, manage demand, and ensure the efficient production of goods and services. By mastering these topics, you will be able to improve operational performance and contribute to the overall success of your organization.

Topic 1. Business Strategy

Understand the role of business strategy in operations management. Learn how to align operational activities with the broader strategic goals of the organization to ensure cohesive and effective execution.

Topic 2. Operations Management

Gain a comprehensive understanding of operations management principles. Explore key concepts such as process design, capacity planning, and supply chain management to enhance operational efficiency.

Topic 3. Demand

Learn how to forecast and manage demand effectively. Understand various demand planning techniques and tools to ensure that your organization can meet customer needs without overproducing or underproducing.

Topic 4. Product Development

Explore the stages of product development, from idea generation to market launch. Learn how to manage the development process, coordinate cross-functional teams, and ensure that new products meet customer expectations.

Topic 5. Operating Systems

Understand the different types of operating systems used in production and service environments. Learn how to select and implement the right system to improve efficiency, quality, and customer satisfaction.

Topic 6. Process Planning and Management

Delve into process planning and management techniques. Learn how to design, analyze, and optimize processes to ensure that operations run smoothly and efficiently.

Topic 7. Operational Planning

Learn the principles of operational planning, including resource allocation, scheduling, and workflow management. Understand how to create effective plans that align with strategic objectives and improve operational performance.

Topic 8. The Human Factor in Operations Management

Explore the impact of human factors on operations management. Learn about workforce management, employee motivation, and the role of leadership in fostering a productive and engaged operational team.