

# DATA with PUR POSE

[novaims.unl.pt](http://novaims.unl.pt)



POSTGRADUATE AND MASTER'S DEGREE PROGRAMS

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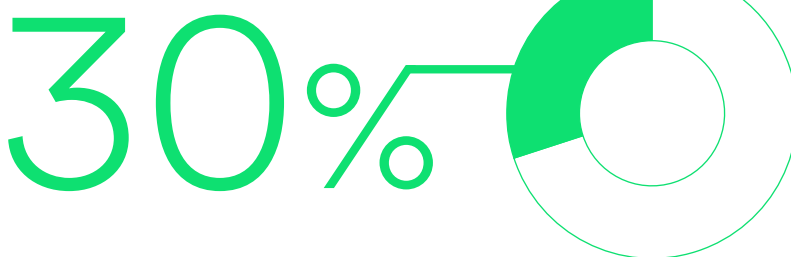
## Transforming data into opportunities

At NOVA IMS, we believe data is the key to success. Here, we combine innovation, technology, and knowledge to train professionals to face the challenges of the present and the opportunities of the future. With a global community and practical, innovative training, we open doors to a market without borders.

### Student nationalities



### International students



11

### Professors

Recognized in the top 2% of researchers worldwide ranking by Stanford/Elsevier

**TOP 2%**  
**SCIENTISTS**  
LEADING MINDS IN SCIENCE

### Employability rate\*

99%

Measured according to the QS Employment Rate criteria, based on the latest independent ObipNOVA (2020) report on NOVA IMS master's graduates one year after graduation.



# DATA with PURPOSE



**Miguel de Castro Neto**  
Dean  
NOVA IMS

## What if data could redefine the future?

Choosing a postgraduate or master's degree is a strategic decision – one that opens new possibilities and broadens your impact on your career, organization, and society.

At NOVA IMS, we believe data is the key to solving real-world challenges. Here, artificial intelligence, advanced analytics, and information management drive meaningful solutions that create impact where it matters most. Our motto, 'Data with Purpose', embodies this vision: transforming data into decisions, numbers into strategies, and knowledge into impact.

With over 4,000 students from 98 nationalities, we shape the leaders of digital transformation – professionals at the forefront of innovation across industries. Our programs are consistently ranked among the world's best, thanks to a unique approach that blends academic excellence with practical application, market relevance, and direct access to top faculty and researchers.

More than just a diploma, what we truly offer is a path – a journey designed for those seeking growth, reinvention, and a place at the forefront of a world where data drives progress.

NOVA IMS is a dynamic learning environment, an ecosystem of knowledge and networking where opportunities happen. Whatever your professional background or area of expertise, there is a program tailored to your goals, allowing you to develop skills that make a real impact.

The future begins now.  
And it starts here.

“

Here, artificial intelligence, advanced analytics, and information management drive meaningful solutions that create impact where it matters most.”

# Testimonials

## Alumni

Our alumni are a testament to the transformative impact of NOVA IMS's programs. Their experiences highlight remarkable academic journeys, filled with opportunities for growth and professional success across leading sectors and organizations.



**Manuel Félix**  
AI&Data Manager

EY

NOVA IMS' commitment to academic excellence and its strategic collaborations provide students with a unique level of credibility. This prestige not only enhances the quality of education but also increases students' visibility in the job market, setting them apart as professionals from an institution at the forefront of innovation in fields such as data science and analytics.



**Liliana Pinho Dias**  
Managing Partner

Bound.health

With a hands-on approach and a competent, engaged, and dedicated faculty, deeply experienced and aligned with the latest developments in data analytics and business intelligence, NOVA IMS provided me with an incredible learning journey that exposed me to areas of knowledge well beyond my comfort zone.



**Fábio Silva**  
Procurement Excellence

EDP

NOVA IMS provided me with a transformative experience in a stimulating learning environment. The faculty's multicultural diversity and excellence offers perspectives that go beyond borders and span various market sectors. As an alumnus, I am grateful for the impact NOVA IMS has had on my professional development.



**Sara Santos**  
Strategy Manager

Accenture

Studying at NOVA IMS was a stimulating experience, defined by hands-on learning through projects and collaboration with peers from diverse professional backgrounds. It fosters professional growth and the development of a strategic business vision combined with a strong technological focus.



**Pedro Guerra**  
Lead Data Engineer

Banco de Portugal

Studying at NOVA IMS was an intense, transformative, and highly rewarding experience. The combination of academic rigor, excellence, practical relevance, and strong connections with industry and government entities made this institution the obvious choice for my studies.



**Patrícia Afonso**  
Digital Data Analyst

Mercedes-Benz.io

I couldn't have made a better choice than studying at NOVA IMS – an institution that offers excellence in education and the essential tools to prepare future data analytics specialists for both national and international markets. I also highlight the strong sense of collaboration among peers and the academic spirit of the NOVA IMS community, which undoubtedly leaves a lasting impact on every student.

# Employers

Leading companies recognize the quality of our students and the added value of the skills they acquire at NOVA IMS. These testimonials reinforce employers' trust in our education and highlight the contribution of our graduates to the success of their teams.



**Cláudia Vieira**

Academic Partnerships Senior Manager

## Jerónimo Martins

NOVA IMS students are highly skilled, with solid foundations in mathematics and data analysis – and for us this is undoubtedly the future! With Artificial Intelligence evolving daily, it is crucial for us to have these profiles to help navigate this transformation.



**Andrea Liuzzo**

Senior Program Manager Lead

## Nokia

NOVA IMS is the top source of talent in Data Science, Information Management, and Information Systems. Many of its students join Nokia, where they stand out for their exceptional performance and take on a central role in the company's culture and the promotion of process mining knowledge.



**Rui Borges**

CEO

## Plot

NOVA IMS is widely recognized for its academic excellence in fields crucial to the future of communication. Its students possess strong analytical and innovation skills and demonstrate a proactive approach. They are particularly valuable in data analysis and generating insights that enhance creativity.



**Mariana Coelho**

Talent Attraction & Acquisition

## Fidelidade

What sets NOVA IMS' students apart is their strong technical skills. With a highly practical and industry-focused education, they develop advanced technical expertise and a hands-on approach to solving real-world organizational challenges.



*View the full testimonials here*



# Accreditations and Certifications

NOVA IMS stands out for its academic excellence and international recognition, reflected in its accreditations, certifications, and top positions in prestigious rankings. These distinctions guarantee a high-quality education aligned with global best practices.



**Eduniversal**  
Nine Master's and Postgraduate programs recognized by Eduniversal, the international agency that publishes the annual ranking of the world's best Masters and MBAs in the world, ranked in the World TOP Ranking of the Best Masters 2025.



**EMOS**  
The Master's/Postgraduate Program in Statistical Systems is certified by EMOS (European Master in Official Statistics), a designation awarded by the European Statistical System (ESS).



**Celonis**  
Recognized as one of the 13 Academic Centers of Excellence worldwide by Celonis, the leading process mining company featured in the Gartner Magic Quadrant™ 2025.



**Erasmus Mundus Program**  
The Master's Program in Geospatial Technologies is part of the Erasmus Mundus program by the European Commission and has been recognized as a leading European master's program for academic excellence.



**AACSB**  
The double degree Master's Program in Information Systems Management is offered in partnership with the University of Ljubljana, which holds AACSB (Association to Advance Collegiate Schools of Business) accreditation.



Agência de Avaliação e Acreditação do Ensino Superior

**A3ES**  
Degree-granting programs are accredited by A3ES (Agency for Assessment and Accreditation of Higher Education).



## QS Stars

NOVA IMS was awarded a 5-star rating in the QS Stars University Ratings, one of the most prestigious international evaluation systems for higher education institutions. The school achieved the highest score across all nine dimensions assessed.



## iSchools

NOVA IMS was the first institution in the Iberian Peninsula to join iSchools, an international organization that brings together leading universities in information science research and education.



## USGIF

The first university outside the U.S. to obtain GEOINT (Geospatial Intelligence) accreditation from the United States Geospatial Intelligence Foundation (USGIF).



## UNIGIS

Accredited as a member of UNIGIS, an international network of leading schools in Geographic Information Systems.



## ABET

It offers Europe's first bachelor's degree accredited in Information Systems by ABET, the leading U.S. accreditation agency for quality assurance and innovation in academic programs across applied science, computing, engineering, and technology-related fields.



## Quality Management System

The Quality Management System of NOVA IMS is certified under the NP EN ISO 9001:2015 standard by APCER, covering student services and support for course delivery.



# NOVA IMS Academic Programs

At NOVA IMS, we offer postgraduate and master's programs designed for different stages and objectives in your professional life. Whether you are starting your career, specializing in a field, or seeking market-driven training, we have a path tailored for you.

## FIND THE RIGHT PATH FOR YOU

<b>Postgraduate Programs</b> (PG)	For professionals and recent graduates looking to deepen their knowledge in a specific area without pursuing an academic degree. With a two-semester duration and an after working hours format, these programs allow for a balance between studies and professional life.
<b>Executive Postgraduate Programs</b> (PGE)	Designed for experienced professionals seeking intensive and applied specialization. These one-semester programs, offered in an after working hours format, focus on real-world challenges and enable the immediate application of acquired knowledge.
<b>Master's Degree Programs</b> (M)	Designed for those seeking an advanced academic specialization, combining theoretical rigor with practical application. With a duration of three to four semesters, these programs confer a master's degree and are available during both working hours and after working hours format, allowing professionals to balance their studies with their careers.
<b>Executive Master's Degree Programs</b> (ME)	Designed for experienced professionals seeking to develop strategic and specialized skills. These intensive, two-semester programs follow a practical, market-driven approach, with strong connections to partner companies and a focus on applied projects.

## KNOWLEDGE AREAS

Regardless of your chosen path, at NOVA IMS, you will find seven key fields of knowledge, aligned with market trends and the challenges of the digital world.

- Data Science & Analytics
- Data-driven Marketing
- Information Systems
- Finance, Risk Management, and Insurance
- Geo Informatics & Analytics
- Health
- Business and Information Management

## WHAT IS YOUR NEXT STEP?

Whatever your path, at NOVA IMS you will find a program tailored to you, offering excellence in education, strong industry connections, and valuable networking opportunities. NOVA IMS combines academic rigor with real-world business experience, equipping you to navigate digital transformation and stand out in a data-driven world.



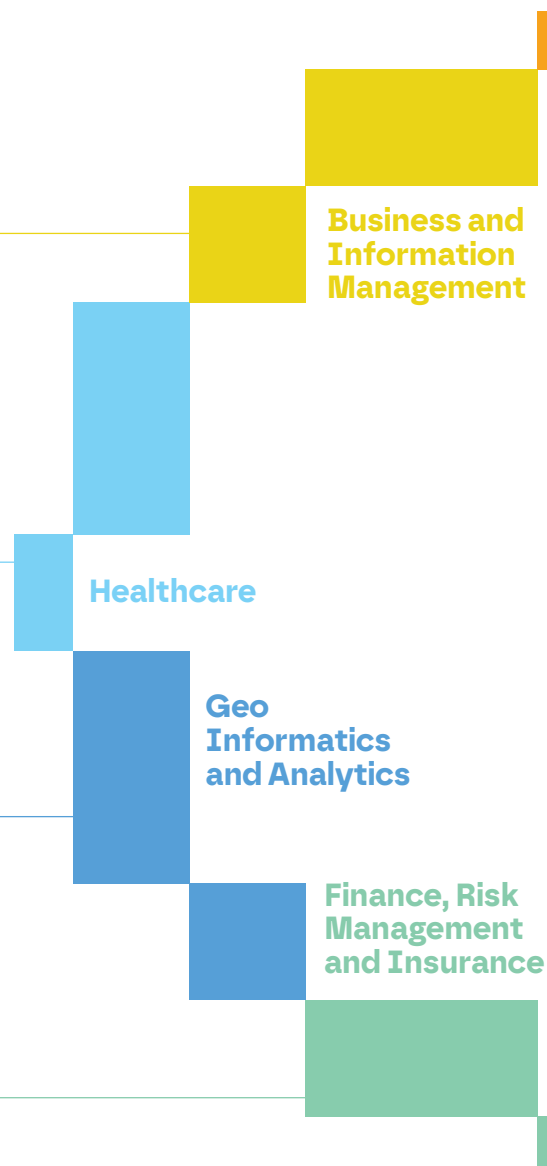
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## Postgraduate Program

# Artificial Intelligence for Business Transformation

This Postgraduate Program equips managers and professionals to lead digital transformation by mastering artificial intelligence, machine learning, big data & analytics, IoT, and other disruptive technologies. In a scenario where innovation redefines competitiveness, this course prepares leaders to align technology with strategy effectively.

With a practical and strategic approach, the program focuses on developing new business models, optimizing processes, and strengthening organizational strategy.

As an evolution of the former Postgraduate Program in Digital Enterprise Management, this updated version features an advanced curriculum tailored to the demands of today's market. Recognized by Eduniversal as one of the top courses in Western Europe for innovation and project management, this program further prepares professionals for the challenges of the digital era.

## Goals

The program aims to train specialists capable of:

- Leading business transformation processes aligned with organizational strategy, driving change in processes, structures, and human resources;
- Selecting and implementing the most suitable technological solutions to maximize organizational profitability and productivity;
- Exploring market best practices and applying artificial intelligence and emerging technologies in real-world business transformation scenarios;
- Applying advanced methodologies and consolidating acquired knowledge through a final capstone project.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 51 in mandatory course units:

- AI Business Case;
- AI Digital Systems;
- Big Data Analytics for Business;
- Business AI Architecture;
- Business Transformation Capstone Project;
- Change Management;
- Enterprise 5.0;
- Future of Work;
- Human-Machine Collaboration;
- Modelling Technology Adoption;
- Strategy and Methodologies for Transformation.

The remaining 9 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinators

Jorge Carrola Rodrigues

Pedro Ruivo

Tiago Oliveira

Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/AI4BT](http://www.novaims.unl.pt/AI4BT)

**Master's Program**  
Information Management  
**Specialization**  
Business Intelligence

**#1 World**

EDUNIVERSAL  
**Best Masters  
Ranking 2025**

## Postgraduate Program

# Business Intelligence

The globalized and ever-changing environment in which businesses operate has promoted the ability to leverage data and digital transformation to manage information and knowledge in organizations as a critical success factor for business.

This Postgraduate Program aims to train experts and managers who are able to design, build, and use business intelligence and analytics processes to support organizational decision-making and knowledge management, inducing value creation and promoting operational and strategic excellence.

## Goals

The course aims to train specialists who are able to:

- Introduce the principles of knowledge management to improve organizational efficiency and effectiveness, in order to promote the competitiveness of organizations;
- Understand the process of business intelligence and its role in creating value for business;
- Use analytical applications to monitor organizations' performance and visualization tools;
- Understand the purpose and learn the main data mining and predictive analytics techniques;
- Identify the key indicators of analytical applications in a business context.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 45 in mandatory course units:

- Business Intelligence I;
- Business Intelligence II;
- Data-Driven Decision-Making;
- Data Governance;
- Data Mining I;
- Data Mining II;
- Data Privacy, Security and Ethics;
- Knowledge Management.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Fernando Bação





## Postgraduate Program

# Intelligence Management and Security

The Postgraduate Program in Intelligence Management and Security equips individuals with the expertise to comprehensively understand and effectively address the diverse challenges confronting various institutions within the contemporary security, defense, international cooperation, and information landscape on a global scale. This program fosters analytical capabilities across various domains and introduces methodologies essential for evaluating, managing, and making decisions within intricate international security and defense contexts. It requires a comprehensive understanding of the regional political, diplomatic, economic, and societal framework, especially concerning the emergent risks and novel challenges introduced by cybersecurity, counterintelligence, artificial intelligence, foresight, and scenario building.

## Goals

The course aims to train specialists who are able to:

- Comprehend the various phases of the information production cycle;
- Understand and critically analyze the risks, threats, and opportunities arising from today's BANI (Brittle, Anxious, Nonlinear, and Incomprehensible) world;
- Demonstrate knowledge of intelligence, information gathering, and data analysis techniques;
- Communicate complex issues clearly and effectively;
- Support decision-making through the effective use of knowledge management, competitive, and business intelligence processes;
- Understand the role of strategic intelligence and the additional challenges posed by cybersecurity, counterintelligence, and artificial intelligence from a forward-looking perspective.

## Study plan

The Study Plan consists of 8 mandatory course units, total of 60 ECTS:

- Cybersecurity;
- Economic and Competitive Intelligence;
- Globalization and Security Risks;
- Intelligence Services and Political Regimes;
- Methodology and Techniques of Analysis and Prospective;
- Regional Dynamics of Security and Defense;
- Social Network Intelligence;
- Structured Analytic Techniques for Intelligence Analysis.

## Program coordinators

Guilherme Victorino  
Teresa Rodrigues

## Program length

Two semesters, total of 60 ECTS.

Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/GIS](http://www.novaims.unl.pt/GIS)

## Executive Postgraduate Program

# Data-driven Public Policies

The increasing digitalization of public administration and the advancements in data science are transforming policy formulation and management. The Executive Postgraduate Program in Data-driven Public Policies addresses this challenge by equipping policymakers and public sector managers with the skills to leverage data for more effective and innovative policies. This executive program focuses on integrating advanced analytical techniques, including artificial intelligence, into public policy formulation, empowering participants to make informed, evidence-based decisions. The course covers key topics such as data governance, AI applications in public policy, impact assessment, and digital regulation. Its methodology combines a strong practical component – featuring case studies and applied projects – with a solid conceptual foundation.

### Goals

The course aims to train specialists who are able to:

- Understand the fundamental principles of public policy and its connection to data science;
- Apply advanced analytical techniques to support the formulation and evaluation of public policies;
- Integrate artificial intelligence and machine learning approaches into evidence-based policy development;
- Implement data governance models to optimize public management and transparency;
- Assess the impact of public policies using quantitative and qualitative methods;
- Understand the ethical and legal implications of data usage in public policy;
- Develop strategic skills for managing innovation and digital transformation in public administration.

### Program length

One semester, total of 30 ECTS.

### Study plan

The curriculum of this course consists of 7 course units, total of 30 ECTS:

- Data Governance;
- Data Science for Public Policy;
- Impact Assessment and Artificial Intelligence;
- New Horizons;
- Policy and Service Design;
- Smart and Sustainable Cities and Territories;
- Smart Regulation.

### Program coordinators

Miguel de Castro Neto  
Pedro Simões Coelho





## Executive Postgraduate Program

# Smart Cities and Urban Analytics

The increasing digitalization of cities and the growing demand for innovative solutions in sustainable urban management require skilled professionals to integrate emerging technologies into city governance and planning. The Executive Postgraduate Program in Smart Cities and Urban Analytics addresses this need by equipping managers and decision-makers with the tools to optimize infrastructure, enhance energy efficiency, and implement mobility and sustainability strategies based on data and artificial intelligence. This executive program combines theory and practice, covering topics such as Urban Analytics, digital transformation, data governance, and sustainable urban planning. Students will engage with real-world challenges through applied projects and collaboration with partner organizations, including public administration and technology companies.

### Goals

The course aims to train specialists who are able to:

- Understand the principles of smart cities and their application in sustainable urban management;
- Apply urban data analysis techniques, artificial intelligence, and big data to optimize infrastructure and services;
- Develop and implement data-driven public policies while ensuring privacy, security, and transparency;
- Integrate digital transformation methodologies and tools to modernize urban services;
- Foster technological innovation and the efficient management of resources in cities.

### Study plan

The Study plan consists of 8 mandatory course units, total of 60 ECTS:

- Data Governance;
- Digital Transformation;
- Leadership, Change, and Impact;
- New Horizons;
- Smart Cities and Territories;
- Sustainability;
- Urban Analytics;
- Urban Planning.

### Program length

One semester, total of 30 ECTS.

### Program coordinator

Miguel de Castro Neto





## Master's Degree Program

# Data Science and Advanced Analytics

Specialization: **Business Analytics**

#1 Portugal

#1 Western Europe

EDUNIVERSAL  
Best Masters  
Ranking 2025

The Master's Degree Program in Data Science and Advanced Analytics is designed for people with analytical skills wishing to meet the challenges of modern technology and turn data into knowledge. The specialization in Business Analytics is oriented toward information management in business and aims to train students with a strong business background, allowing them to identify and implement the most suitable analytical models for different business problems and functional areas. In addition, students will be able to interpret the results of business analytics and their implications for business. Finally, according to the data analysis results, they will be able to make data-driven decisions to optimize business processes. In every academic year, partner companies offer paid internships to 1<sup>st</sup> year students, to be undertaken during the 2<sup>nd</sup> year. 1<sup>st</sup> year students should apply for the internship(s) they are interested in. The internship will be awarded to the student who meets the best qualifications in their application.

## Goals

The course aims to train specialists who are able to:

- Understand the main paradigms associated with large databases and data warehouses;
- Understand the processes of decision-making;
- Master data mining tools, particularly for challenges related to big data;
- Master the processes of creation and maintenance of descriptive and predictive models;
- Recognize and apply the most effective analytical models to different business cases;
- Interpret models and their implications for business.

## Study plan

The curricular component of the master's degree corresponds to 60 ECTS, including 48 ECTS in mandatory course units and 12 ECTS in electives chosen by the students from a range of course units available.

For more information on the study plan and different specializations available in this master's, please refer to page 31.

## Program coordinator

Roberto Henriques

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

### Partnership



### Internship Agreements



For more information or to apply, please visit: [www.novaims.unl.pt/MDSAA-BA](http://www.novaims.unl.pt/MDSAA-BA)



#1 World

EDUNIVERSAL  
Best Masters  
Ranking 2025

Master's Degree Program

# Information Management

Specialization: **Business Intelligence**

The Master's Degree Program in Information Management, with a specialization in Business Intelligence, aims to train experts and managers to design, build, and use business intelligence and analytics processes to support organizational decision-making and knowledge management, inducing value creation and promoting its operational and strategic excellence.

This program is offered in two formats:

- **Working Hours (WH):** aimed at young graduates and professionals who intend to study on a full-time basis;
- **After Working Hours (AWH):** particularly aimed at professionals who intend to make their studies compatible with their professional activity.

## Goals

The course aims to train specialists who are able to:

- Apply the principles of knowledge management to improve organizational efficiency and effectiveness in order to promote the competitiveness of organizations;
- Understand the process of business intelligence and its role in creating value for the business;
- Use analytical applications to monitor organizations' performance and visualization tools;
- Understand the purpose and apply the main techniques of data mining and predictive analytics;
- Identify the key indicators of the analytical applications in a business context.

## Study plan

The curricular component corresponds to 60 ECTS, including 45 in mandatory course units:

- Business Intelligence I;
- Business Intelligence II;
- Data-Driven Decision-Making;
- Data Governance;
- Data Mining I;
- Data Mining II;
- Data Privacy, Security and Ethics;
- Knowledge Management.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program length

Three semesters: 2 for the academic component, and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature and the completion of the Research Methodologies Course Unit, total of 95 ECTS.

## Program coordinator

Fernando Bação



## Executive Master's Degree Program

# Advanced Digital Technologies for Business

As part of the DIGITAL4Business initiative, the Joint Professional Program in Advanced Digital Technologies for Business aligns with the mission of fostering innovation and leadership in digital transformation across European industries.

In a landscape where artificial intelligence (AI) is reshaping business models, operational strategies, and decision-making processes, organizations rely on leaders who can transform cutting-edge technology into practical business applications.

Developed in collaboration with leading academic institutions – National College of Ireland (NCI), Università di Bologna (UNIBO), and Linköping University (LIU) – this program provides a strategic approach, enabling participants to explore core AI competencies, such as machine learning, predictive analytics, and AI governance while engaging with real-world applications through case studies and project-based learning.

## Goals

The course aims to train specialists who are able to:

- Critically appraise, select, and employ existing and emerging technologies to address complex business problems and support innovation and digital transformation in business
- Critically assess and evaluate sustainability, governance, and ethical risks and impacts associated with digital transformation.
- Synthesize and communicate the opportunities, risks, and critical challenges of digital transformation practices to underpin strategic decisions to key stakeholders.
- Critically appraise the fundamental concepts and demonstrate techniques of advanced digital skills from a business perspective.
- Cultivate transversal skills and practices, evaluate their application in various contexts, and explore techniques to foster creativity at individual, team, and organizational levels.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

Provided by NOVA IMS:

- Business Programming;
- Data Science for Business;
- Generative AI;
- Risk & Change Management in Digital Business Environments.

Provided by the other academic partners:

- AI for Business;
- Blockchain Technologies;
- Cloud Computing for Business;
- Cybersecurity for Business;
- Data Governance and Ethics;
- Digital Transformation;
- Digital Transformation Project;
- Innovation;
- Internet of Things;
- Quantum Computing.

## Program coordinators

Mauro Castelli  
Roberto Henriques

### Partnership



AKKODIS

Digital  
Technology  
Skills

LHH

LIU  
LINKÖPING  
UNIVERSITY

matrix  
INTERNET



SCHUMAN  
ASSOCIATES

Skillnet  
IRELAND

terawe

German University  
of Digital Science



## Executive Master's Degree Program

# Artificial Intelligence for Business

Artificial intelligence (AI) is transforming the business sector, driving innovation, and enabling more informed and strategic decision-making. The Executive Master's in Artificial Intelligence for Business is designed to equip leaders and managers with the practical skills to apply AI in optimizing operations, creating new business models, and generating competitive advantage. This program is aligned with emerging AI trends, covering topics ranging from machine learning and predictive analytics to AI ethics and regulation. The curriculum combines a strong practical component, including case studies and applied project development, ensuring students acquire the essential skills to lead digital transformation within their organizations.

## Goals

The course aims to train specialists who are able to:

- Understand the practical use of AI tools and methods, such as machine learning, computer vision, and natural language processing (NLP), in business contexts;
- Interpret the results of statistical modeling and AI algorithms to support strategic data-driven decision-making;
- Identify opportunities for applying AI solutions in products, services, and business processes, leveraging accessible and available technologies on the market;
- Develop strategies to transform business models through AI, using practical case studies and exploring technologies like machine learning, computer vision, and NLP;
- Integrate AI-based solutions into existing business systems, overcoming adoption barriers through change management strategies.
- Identify requirements and specify AI-based solutions to improve business processes and develop new value propositions using existing tools.

## Study plan

The curricular component of this course consists of 8 course units:

- Artificial Intelligence – Enabled Business Model Innovation module;
- Artificial Intelligence Governance, Ethics & Regulations;
- Augmenting with Artificial Intelligence Vision and Language;
- Foundations of Data-Driven Decision-Making;
- Introduction to Artificial Intelligence and Machine Learning;
- Leading Enterprise Artificial Intelligence Innovation;
- New Horizons;
- Organizational Adoption of Artificial Intelligence.

## Program coordinator

Roberto Henriques

## Program length

Two semesters: one semester for the curricular component and one for the development of the final project, total of 60 ECTS.

## Partnership



Note : Course accredited by A3ES – Agency for Assessment and Accreditation of Higher Education, awaiting registration with DGES – Directorate-General for Higher Education.

For more information or to apply, please visit: [www.novaims.unl.pt/MAI4B](http://www.novaims.unl.pt/MAI4B)



## Executive Master's Degree Program

# Data-driven Innovation and Entrepreneurship

In an increasingly competitive and digital world, success belongs to those who can transform data into strategic decisions and analytical insights into business opportunities. The Executive Master's in Data-Driven Innovation and Entrepreneurship is designed to train leaders capable of fostering innovation and creating value in a sustainable way through data science and artificial intelligence. This program challenges managers, entrepreneurs, and decision-makers to explore the frontiers of innovation and disruptive business models. With a hands-on, action-oriented approach, it integrates key topics such as design thinking, business analytics, value creation models, and startup and innovation financing, equipping participants to turn ideas into projects with real impact. By combining a strong theoretical foundation with practical applications in real-world cases and collaborative projects, this master's program prepares professionals to lead transformation within their organizations or forge their own path to success in the innovation ecosystem.

### Goals

The course aims to train specialists who are able to:

- Understand the fundamental principles of technological innovation and entrepreneurship, including market concepts, feasibility, and product development;
- Analyze emerging technology trends to identify innovation opportunities;
- Develop and validate business models using tools such as the Business Model Canvas, Value Creation Wheel, and Lean Startup;
- Apply design thinking methodologies to solve complex problems and develop creative solutions;
- Build prototypes of innovative products or services and conduct testing with potential users;
- Develop go-to-market and growth strategies for tech startups;
- Demonstrate communication and negotiation skills to pitch innovative ideas to investors and stakeholders;
- Collaborate in interdisciplinary teams to co-create innovative solutions.

### Study plan

The curricular component of this course consists of 8 course units:

- Brand Building in the Digital Age;
- Design Thinking for Data-Driven Innovation;
- Funding New Ventures and Growth Strategies;
- Innovation and Value Creation Wheel;
- Leadership, Change and Impact;
- Leading Entrepreneurial Teams and Organizations;
- New Horizons;
- Strategic Management and International Expansion.

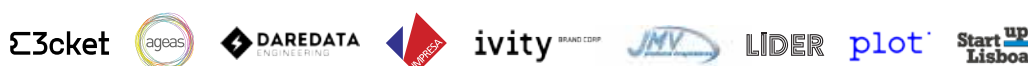
### Program coordinator

Guilherme Victorino

### Program length

Two semesters: one semester for the curricular component and one for the development of the final project, total of 60 ECTS.

### Partnership



*Note : Course accredited by A3ES – Agency for Assessment and Accreditation of Higher Education, awaiting registration with DGES – Directorate-General for Higher Education.*

For more information or to apply, please visit: [www.novaims.unl.pt/MDDIE](http://www.novaims.unl.pt/MDDIE)





## Executive Master's Degree Program

# Data-driven Organizations

The increasing digitalization of businesses and the data-driven transformation of organizations make it essential to equip professionals with the skills to leverage information as a strategic asset. The Executive Master's in Data-Driven Organizations addresses this need by preparing leaders and managers to integrate data-driven strategies into decision-making, ensuring greater efficiency, competitiveness, and innovation within organizations.

This program is aligned with emerging trends in data intelligence, information governance, and digital transformation, covering technologies such as big data, machine learning, business intelligence, and cloud computing. Its pedagogical structure combines a strong practical component, featuring case studies and applied projects, with a solid theoretical foundation, ensuring a seamless connection between knowledge and business practice.

### Goals

The course aims to train specialists who are able to:

- Understand the importance of data in digital transformation and organizational competitiveness;
- Develop and implement data governance strategies to ensure quality, security, and regulatory compliance;
- Apply analytical methodologies and technological tools to extract value from data;
- Apply business intelligence to support strategic decision-making;
- Foster a data-driven culture within organizations, ensuring an ethical and sustainable approach to data usage.

### Program length

Two semesters: one semester for the curricular component and one for the development of the final project, total of 60 ECTS.

### Study plan

The curricular component of this course consists of 8 course units:

- Artificial Intelligence in Business;
- Business Intelligence and Analytics;
- Business Process Optimization;
- Data Governance;
- Data Value Creation Use Cases;
- Digital Transformation Strategies;
- Leadership, Change, and Impact;
- New Horizons.

### Program coordinators

Bruno Jardim  
Jorge Carrola Rodrigues  
Miguel de Castro Neto

#### Partnership

ARQUICONULT

bizall

ERLOG

esri Portugal

IMPULSO

CRATIV

Jerónimo Martins

NEWBRIDGE DIGITAL

unipartner



For more information or to apply, please visit: [www.novaims.unl.pt/MDDO](http://www.novaims.unl.pt/MDDO)



## Postgraduate Program

# Data Analytics

The Postgraduate Program in Data Analytics aims to train professionals and managers capable of leading and guiding the collection, compilation, analysis, and management of information within organizations. Analysts and managers with these skills are scarce in today's data-driven landscape and, consequently, highly sought after by organizations looking for professionals who can navigate vast amounts of information and transform raw data into actionable knowledge.

This program goes beyond traditional statistics, equipping students with the latest tools and techniques to thrive in the digital age. Whether it is analyzing consumer trends, optimizing business decision-making, or forecasting market fluctuations, graduates of this program will be equipped to lead innovation and drive growth. The curriculum combines classical statistical rigor with cutting-edge information management approaches.

### Goals

The course aims to train specialists who are able to:

- Develop techniques and methodologies for data collection;
- Apply various statistical and computational methodologies and tools for data exploration and analysis, reducing uncertainty in decision-making;
- Communicate results effectively, both in writing and orally, tailoring them to the audience's level and specific interests.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 37,5 in mandatory course units:

- Forecasting Methods;
- Multivariate Analysis;
- Regression Analysis;
- Sampling Methods;
- Statistics for Data Analysis;
- Time Series Analysis.

The remaining 22,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

### Program coordinator

Bruno Damásio



**Postgraduate Program**

# Enterprise Cybersecurity and AI

The Postgraduate Program in Enterprise Cybersecurity and AI equips professionals to tackle one of today's biggest organizational challenges: managing ever-growing volumes of security data while threats evolve at unprecedented speed. Centered on the practical application of AI to detection, triage, and response workflows, this program empowers teams to operate with greater accuracy, speed, and effectiveness – driving evidence-based decision-making and stronger collaboration across security, IT, and data teams.

## Goals

The course aims to train specialists who are able to:

- Apply AI to cybersecurity practice by integrating data analytics into detection, investigation, and response;
- Build a shared foundation by establishing a common language for security, data, and IT professionals;
- Support evidence-based operations using data to prioritize work and inform decisions;
- Improve effectiveness and efficiency by reducing noise and accelerating detection and response;
- Use AI responsibly, ensuring appropriate governance, transparency, and privacy;
- Measure and communicate value through clear metrics for technical and managerial stakeholders;
- Foster continuous improvement by refining processes and tools based on feedback and experience.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including the following 10 course units:

- Introduction to Cybersecurity Principles and Threat Landscape;
- Information Security Management and Governance;
- Foundations of Data Privacy and Ethics;
- Core Cybersecurity Network Security;
- Cyber Threat Intelligence and Incident Response;
- Cybersecurity for Cloud and Hybrid Environments;
- Ethical Hacking and Security Testing;
- Core Artificial Intelligence AI and Data Fundamentals;
- Artificial Intelligence for Cybersecurity;
- Professional Practice Capstone Project and Cybersecurity Leadership.

## Program coordinator

Fernando Bação



#3 Europe #1 Portugal

#3 World

QS  
Best Masters  
Ranking 2024**Postgraduate Program**

# Enterprise Data Science & Analytics

Developed in partnership with Microsoft, the Postgraduate Program in Enterprise Data Science & Analytics introduces the methodologies and tools that transform data into information, enabling enterprises to make strategic decisions on entering new markets, launching new products or services, optimizing processes, transforming business models, and, generally, competing in an increasingly data-driven market. This program aims to qualify professionals in the use of big data and machine learning methodologies and tools.

**Goals**

The course aims to train specialists who are able to:

- Explore and transform data;
- Create data models and data visualization;
- Apply statistical methods to data;
- Apply data science methodologies;
- Implement and validate machine learning models;
- Apply data science techniques in common scenarios within enterprise environments.

**Program length**

Two semesters, total of 60 ECTS.

**Study plan**

To be awarded the postgraduate diploma, students must complete 9 course units:

- Analyzing and Visualizing Data;
- Analyzing Big Data;
- Big Data Foundations;
- Data Science and Machine Learning;
- Deep Learning Neural Networks;
- Enterprise Data Science Bootcamp;
- Managing Relational and Non-Relational Data;
- Programming for Data Science;
- Statistics for Enterprise Data Analysis.

**Program coordinators**

Henrique Carreiro  
Roberto Henriques

Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/EDSA](http://www.novaims.unl.pt/EDSA)



## Postgraduate Program

# Generative AI for Business

The Postgraduate Program in Generative AI for Business equips managers and professionals to understand, assess, and strategically apply generative artificial intelligence within their organizational contexts. By combining business vision, technology, and ethics, the program develops the skills needed to drive innovation, optimize processes, and make informed decisions in a rapidly evolving digital landscape.

### Goals

The course aims to train specialists who are able to:

- Strategically apply generative artificial intelligence within organizations;
- Develop a comprehensive understanding of the capabilities and limitations of generative AI;
- Gain tools to critically evaluate AI solutions and assess their business impact;
- Design strategies for innovation, transformation, and competitive advantage driven by AI;
- Foster responsible and ethical decision-making in the adoption and use of AI;
- Acquire practical experience in implementing generative AI projects aligned with organizational goals.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including the following 12 course units:

- Generative AI foundations;
- AI tools for business professionals;
- Digital transformation and Generative AI Strategy;
- Generative AI applications;
- Prompt engineering and interaction design;
- Data-Driven Decision Making with Generative AI;
- Agentic AI and Autonomous Business Systems;
- Ethics and responsible AI;
- AI governance and regulation;
- Human-Centered Generative AI and change management;
- AI Project management & implementation;
- Capstone Project in Generative AI for Business.

### Program coordinators

Pedro Simões Coelho





## Postgraduate Program

# Statistical Systems

Specialization: **Central Bank Statistics**

The Postgraduate Program in Statistical Systems, with a specialization in Central Bank Statistics, was developed in close collaboration with the Bank of Portugal in order to provide managers and technical staff that work in the field of central bank statistics – either as producers, analysts, or users of statistical information – the fundamental knowledge and skills to carry out their work. This program, accredited by the European Statistical System (ESS) with the European Master of Official Statistics (EMOS) and recognized by the European Central Bank, places special emphasis on the collection and compilation of monetary, financial, foreign exchange, and balance of payments statistics, including those arising directly from the participation of the Bank of Portugal in the European System of Central Banks (ESCB).

## Goals

The course aims to train specialists who are able to:

- Manage and lead the process of statistical production in central banks;
- Develop techniques and methodologies of data collection;
- Master the tools and processes used for the storage, organization, and access to information in an entity responsible for the production of statistics of central banks;
- Apply statistical and computational methodologies and exploration and information analysis tools to produce official statistics that can add value to decision-making;
- Communicate results in written or oral form, adapting them to the level and specific interests of the audience.

## Program length

Two semesters, total of 60 ECTS.

## Program coordinator

Pedro Simões Coelho

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS. Students will choose the course units from the following:

- Analysis of Discrete Data;
- Analysis of Variance;
- Business Intelligence;
- Computational Statistics I;
- Computational Statistics II;
- Data Collection, Administrative, Sources and Big Data;
- Data Management for Official Statistics;
- Databases Management;
- Descriptive Data Mining;
- Econometric Methods;
- External Statistics and Globalization;
- Financial Report;
- Forecasting Methods;
- Monetary and Financial Statistics;
- Multivariate Data Analysis;
- National Accounts;
- Predictive Data Mining;
- Sampling and Estimation;
- Statistical Communication;
- Time Series Analysis.

Partnership



Accreditation



Support



Irving Fisher Committee on  
Central Bank Statistics  
BANK FOR INTERNATIONAL SETTLEMENTS



For more information or to apply, please visit: [www.novaims.unl.pt/SE-EBC](http://www.novaims.unl.pt/SE-EBC)

## Postgraduate Program

# Statistical Systems

Specialization: **Official Statistics**

The Postgraduate Program in Statistical Systems, with a specialization in Official Statistics, aims at endowing technical staff and managers who work in the scope of the National Statistical Systems (NSS), either as producers, analysts, or users of statistical information, the knowledge, and skills crucial to the exercise of their activity. This program, accredited by the European Statistical System (ESS) with the European Master of Official Statistics (EMOS) seal, offers specialized training in official statistics, particularly in the production of statistics included in the statistical activity of NSS and international statistical organizations of which Portugal is a member.

## Goals

The course aims to train specialists who are able to:

- Manage and lead the process of producing official statistics;
- Develop techniques and methodologies of data collection;
- Master the tools and processes used for the storage, organization, and access to information in an entity responsible for the compilation of statistics;
- Apply statistical and computational methodologies and exploration and information analysis tools, to produce official statistics that can add value to decision-making;
- Communicate results in written or oral form, adapting them to the level and specific interests of the audience.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS. Students will choose the course units from the following:

- Accounting and Financial Information;
- Analysis of Discrete Data;
- Analysis of Variance;
- Business Intelligence;
- Computational Statistics I;
- Computational Statistics II;
- Data Collection, Administrative Sources and Big Data;
- Databases Management;
- Data Management for Official Statistics;
- Descriptive Data Mining;
- Econometric Methods;
- Forecasting Methods;
- Multivariate Data Analysis;
- National Accounts;
- Predictive Data Mining;
- Sampling and Estimation;
- Statistical Communication;
- Statistical Methods;
- Time Series Analysis.

## Program coordinator

Pedro Simões Coelho

## Accreditation



For more information or to apply, please visit: [www.novaims.unl.pt/SE-EO](http://www.novaims.unl.pt/SE-EO)

## Master's Degree Program

# Data Science and Advanced Analytics

Specialization: **Artificial Intelligence and Computational Systems**

#1 Portugal

Western  
#1 EuropeEDUNIVERSAL  
Best Masters  
Ranking 2025

The Master's Degree Program in Data Science and Advanced Analytics is designed for individuals with analytical skills who seek to tackle the challenges of modern technology by transforming data into knowledge. The specialization in Artificial Intelligence and Computational Systems provides advanced training for students with a strong foundation in data science. It explores emerging AI techniques and modern computational methods, preparing students to tackle complex problems that require sophisticated models and algorithms. This specialization is ideal for those looking to deepen their expertise in intelligent systems and innovative learning approaches.

## Goals

The course aims to train specialists who are able to:

- Applying advanced artificial intelligence techniques, including emerging deep learning methods and representational models;
- Developing complex models and algorithms to solve highly challenging computational problems;
- Creating intelligent systems with adaptive, autonomous, and AI-based components;
- Evaluating and optimizing AI models, ensuring performance, robustness, and generalization capability;
- Implementing AI solutions in advanced computing environments, including distributed architectures and specialized hardware;
- Exploring emerging approaches in artificial intelligence, understanding their technical, ethical, and societal implications.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Study plan

The curricular component of the master's degree corresponds to 60 ECTS, including 50 ECTS in mandatory course units and 10 ECTS in electives chosen by the students from a range of course units available.

For more information on the study plan and different specializations available in this master's, please refer to page 31.

## Program coordinator

Roberto Henriques

### Partnership



### Internship Agreements



For more information or to apply, please visit: [www.novaims.unl.pt/MDSAA-AICS](http://www.novaims.unl.pt/MDSAA-AICS)



## Master's Degree Program

# Data Science and Advanced Analytics

Specialization: **Data Engineering and Scalable Technologies**

#1 Portugal

**Western  
#1 Europe**

 EDUNIVERSAL  
**Best Masters  
Ranking 2025**

The Master's Degree Program in Data Science and Advanced Analytics is designed for individuals with analytical skills who seek to tackle the challenges of modern technology by transforming data into knowledge. The specialization in Data Engineering and Scalable Technologies provides training focused on the technological aspects of the data field. It emphasizes developing skills in programming, data management and structuring, as well as implementing technological solutions that support analytical systems. This specialization prepares professionals to operate in environments demanding efficiency, scalability, and technical precision.

## Goals

The course aims to train specialists who are able to:

- Designing, implementing, and managing robust data processing and transformation workflows suited to different organizational architectures;
- Mastering distributed and large-scale processing technologies, including cloud environments and big data frameworks;
- Designing and optimizing storage infrastructures, ensuring performance, security, and data integrity;
- Integrating and operationalizing analytical models in production environments, ensuring scalability and availability;
- Applying programming and parallel computing knowledge to deliver technically efficient, performance-oriented solutions.

## Study plan

The curricular component of the master's degree corresponds to 60 ECTS, including 49.5 ECTS in mandatory course units and 10.5 ECTS in electives chosen by the students from a range of course units available.

For more information on the study plan and different specializations available in this master's, please refer to page 31.

## Program coordinator

Roberto Henriques

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

### Partnership



### Internship Agreements



For more information or to apply, please visit: [www.novaims.unl.pt/MDSAA-DEST](http://www.novaims.unl.pt/MDSAA-DEST)

## Master's Degree Program

# Data Science and Advanced Analytics

Specialization: **Data Science**

#1 Portugal

Western  
#1 EuropeEDUNIVERSAL  
Best Masters  
Ranking 2025

The Master's Degree Program in Data Science and Advanced Analytics is designed for individuals with analytical skills who seek to tackle the challenges of modern technology by transforming data into knowledge. The specialization in Data Science is more focused on information technology and computer science, providing in-depth technical skills that enable students to master the most well-known and widely used paradigms and environments for software development. Graduates of this program will be proficient in problem-solving, optimization, and computational intelligence. They will have the technical expertise to address big data challenges and possess strong skills in advanced methods such as deep learning. Each academic year, partner companies offer paid internships to 1<sup>st</sup> year students, to be undertaken during the 2<sup>nd</sup> year. The internship will be awarded to the student who meets the best qualifications in their application.

## Goals

The course aims to train specialists who are able to:

- Understand the main paradigms associated with large databases and data warehouses;
- Understand the processes of decision-making;
- Master data mining tools and computational intelligence, in particular for big data-related problems;
- Master the most used paradigms and environments of software development;
- Master the concept of problem-solving.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Study plan

The curricular component of the master's degree corresponds to 60 ECTS, including 49.5 ECTS in mandatory course units and 10.5 ECTS in electives chosen by the students from a range of course units available.

For more information on the study plan and different specializations available in this master's, please refer to page 31.

## Program coordinator

Roberto Henriques

### Partnership



### Internship Agreements



For more information or to apply, please visit: [www.novaims.unl.pt/MDSAA-DS](http://www.novaims.unl.pt/MDSAA-DS)





**Master's Degree Program**

# Statistics and Information Management

**Specialization: Data Analytics**

The Master's Degree Program in Statistics and Information Management, with a specialization in Data Analytics, aims to train experts and managers qualified to lead and guide information collection, compilation, analysis, and management inside organizations. Experts and managers with these skills are highly scarce in today's data-driven landscape, as organizations crave those who can navigate the vast seas of information and transform raw data into actionable insights. The Data Analytics specialization goes beyond traditional statistics, equipping students with the latest tools and techniques to thrive in the digital age. Whether it is analyzing consumer trends, optimizing business decision-making, or predicting market fluctuations, graduates from this program will emerge as strategic leaders capable of driving innovation and growth. The program merges classic statistical rigor with cutting-edge information management approaches.

## Goals

The course aims to train specialists who are able to:

- Develop techniques and methodologies for data collection;
- Apply various statistical and computational methodologies and tools for data exploration and analysis, reducing uncertainty in decision-making;
- Communicate results effectively, both in writing and orally, tailoring them to the audience's level and specific interests.

## Program length

Three semesters: 2 for the academic component, and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature, and for the completion of the Research Methodologies Course Unit, total of 95 ECTS.

## Study plan

The curricular component corresponds to 60 ECTS, including 37,5 in mandatory course units:

- Forecasting Methods;
- Multivariate Analysis;
- Regression Analysis;
- Sampling Methods;
- Statistics for Data Analysis;
- Time Series Analysis.

The remaining 22,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Bruno Damásio



# Data Science and Advanced Analytics

## Study plan

Year	Group Name	Curricular Unit (UC)	ECTS	Data Science specialization	Business Analytics specialization	Data Engineering and Scalable Technologies specialization	Artificial Intelligence and Computational Systems specialization
1 <sup>st</sup> Year	Core Data Science and Analytics Techniques	Data Mining	7,5	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Elective UC
		Data Stream Mining	7,5				Mandatory UC
		Machine Learning	7,5	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Elective UC
		Exploratory Topics in Artificial Intelligence	7,5				Mandatory UC
		Statistics for Data Science	7,5	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Students must choose at least 7.5 ECTS (1 UC)	Elective UC
		Statistical Modeling	7,5				Mandatory UC
	Business-Oriented Analytics	Business Cases with Data Science	7,5	Elective UCs	Students must choose at least 18 ECTS	Elective UCs	Elective UCs
		Business Intelligence	7,5				
		Business Process Analytics	3,5				
		Ethics in Data Science	3,5				
		Digital Transformation	3,5				
	Advanced and Emerging AI Techniques	Deep Learning	7,5	Students must choose at least 7.5 ECTS (1 UC)	Elective UCs	Students must choose at least 8 ECTS (2 UCs)	Students must choose at least 7.5 ECTS (1 UC)
		Computational Intelligence for Optimization	7,5				
		Explainable AI	4	Students must choose at least 8 ECTS (2 UCs)			Mandatory Course Units (16 ECTS)
		Neural and Evolutionary Learning	4				
		Reinforcement Learning	4				
		Natural Language Processing	4				
		Network Analysis	4				
	Big Data and Cloud Computing	Big Data Modelling and Management	3,5	Students must choose at least 3.5 ECTS (1 UC)	Students must choose at least 3.5 ECTS (1 UC)	Students must choose at least 7 ECTS (2 UCs)	Elective UCs
		Big Data and Cloud Computing	3,5				
		Big Data Analytics	3,5	Elective UCs	Elective UCs		
		Blockchain Development	3,5				
	Technology and Infrastructure	Programming for Data Science	4	Students must choose at least 4 ECTS (1 UC)	Students must choose at least 4 ECTS (1 UC)	Students must choose at least 4 ECTS (1 UC)	Unavailable in this specialization
		Programming Methods	4				Mandatory UC
		Storing and Retrieving Data	4	Students must choose at least 4 ECTS (1 UC)	Elective UCs	Students must choose at least 8 ECTS (2 UCs)	Unavailable in this specialization
		Parallel Computing	4				Elective UCs
		MLOPs	4				
2 <sup>nd</sup> Year	Thesis	Research Methodologies	6	Mandatory UCs (60 ECTS)	Mandatory UCs (60 ECTS)	Mandatory UCs (60 ECTS)	Mandatory UCs (60 ECTS)
		Master Thesis	54				
Total Mandatory ECTS				109.5 ECTS	108 ECTS	109.5 ECTS	110 ECTS
Total Elective ECTS				10.5 ECTS	12 ECTS	10.5 ECTS	10 ECTS

## Postgraduate Program

# Customer Experience

The Postgraduate Program in Customer Experience equips professionals to turn data into strategic insights and craft experiences that put the customer at the heart of marketing strategy. Designed to meet the challenges of the digital era, the program blends analytical thinking, strategic insight, and creativity, providing a solid, up-to-date foundation in Consumer Behavior, UX Research, marketing information management, and customer experience optimization across the entire journey. Students work on projects that integrate data analysis and market research to deliver innovative, results-driven solutions in real business contexts.

### Goals

The course aims to train specialists who are able to:

- Analyze consumer behavior and identify opportunities to enhance the customer experience;
- Plan and conduct market studies and applied marketing research;
- Apply analytical methodologies to support strategic decision-making;
- Integrate UX Research and CRM data into customer experience management;
- Implement data-driven loyalty and relationship marketing strategies.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 41,5 in mandatory course units:

- Consumer Behavior;
- Experimental Design;
- Market Research;
- Descriptive Analytics in Marketing;
- Predictive Analytics in Marketing;
- UX Research.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

### Program coordinator

Paulo Rita

### Support and Funding



For more information or to apply, please visit: [www.novaims.unl.pt/CE](http://www.novaims.unl.pt/CE)





## Postgraduate Program

# Data Science for Marketing

The Postgraduate Program in Data Science for Marketing aims to fill a gap in the postgraduate training of professionals in the marketing field who need to acquire new analytical skills with a cross-cutting approach to data science. This program is designed to provide excellent training, articulating key concepts and challenges for marketing decision-making in its multiple strategic, innovative, and methodological perspectives. It includes practical training focused on data processing (data science & big data), artificial intelligence (generative AI & machine learning), and the analysis of social networks and consumer behavior. The versatility in the range of optional course units also allows for the enhancement of theoretical-practical knowledge in several related areas, such as digital marketing, social media, e-commerce, and search engine optimization.

### Goals

The course aims to train specialists who are able to:

- Bridge the gap between marketing and data science, fostering critical thinking about data and drawing conclusions from incomplete information;
- Support marketing decision-making through a practical understanding of the fundamental methods, models, and tools used by data scientists;
- Develop the resources to load, clean, and transform data;
- Identify the best models and methodologies for extracting marketing knowledge from different data sources, which are often heterogeneous and complex;
- Understand the power of big data, obtaining business solutions and processing large streams of data in real time;
- Interpret and communicate data results using a wide range of real-world marketing examples;
- Face the challenges of the modern and dynamic business world.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 41 in mandatory course units:

- Big Data for Marketing;
- Data Science for Marketing;
- Machine Learning in Marketing;
- Marketing Engineering & Analytics;
- Marketing Strategy & Innovation;
- Social Network Analysis.

The remaining 19 ECTS correspond to electives chosen by the students from a wide range of course units, available on the program webpage.

### Program coordinator

Paulo Rita

### Support and Funding



<https://recuperarportugal.gov.pt/>



Financiado pela  
União Europeia  
NextGenerationEU



For more information or to apply, please visit: [www.novaims.unl.pt/DS4M](http://www.novaims.unl.pt/DS4M)



## Postgraduate Program

# Digital Marketing and Analytics

The recent digital revolution has completely changed how people search for information, consume, interact, and learn. In response to this shift, marketing professionals increasingly use decision support systems to sustain their brands and products in the marketplace. The need to adopt analytical approaches to understand and create competitive advantages in this environment has gained greater importance. This postgraduate program provides solid training to meet today's marketing challenges, which allows the development of a strategic and integrated customer vision – both offline and online – and contributes to the improvement of the decision-making process in companies.

## Goals

The course aims to train specialists who are able to:

- Understand digital marketing and its characteristics;
- Understand the operating principles of internet social media and methodologies for its use in creating value for business;
- Understand and apply analytical social media techniques;
- Understand the significance of web analytics;
- Master search engine marketing techniques, including AdWords campaign management and the development of search engine optimization (SEO) strategy.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 41,5 in mandatory course units:

- Digital Analytics;
- Digital Marketing & E-Commerce;
- Marketing Engineering & Analytics;
- Marketing Strategy & Innovation;
- Search Engine Optimization;
- Social Media Analytics.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Paulo Rita

## Support and Funding



<https://recuperarportugal.gov.pt/>



For more information or to apply, please visit: [www.novaims.unl.pt/DMA](http://www.novaims.unl.pt/DMA)



## Postgraduate Program

# Marketing Intelligence

**Master's Degree Program**  
Data-driven Marketing

**Specialization**  
Marketing Intelligence

#5 Europe #2 Portugal

#7 World

EDUNIVERSAL  
**Best Masters  
Ranking 2025**

The Postgraduate Program in Marketing Intelligence trains technical and management staff to lead and guide the collection, organization, analysis, exploration, and dissemination of marketing information in organizations. The program provides a balanced curriculum with two components: one based on tools and methodologies of marketing management and the other supported by information analysis and management methodologies and techniques.

## Goals

The course aims to train specialists who are able to:

- Develop strategies, methods, and instruments of marketing management;
- Understand client behavior and create and manage relationship policies;
- Master the processes and tools used for the storage, organization, and access to information for marketing in companies;
- Apply various methodologies and tools to explore and analyze information, minimizing uncertainty in addressing marketing challenges.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 41 in mandatory course units:

- Brand Management;
- Consumer Behavior Insights;
- Digital Marketing & E-Commerce;
- Marketing Engineering & Analytics;
- Marketing Research;
- Marketing Strategy & Innovation.

The remaining 19 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Paulo Rita

## Support and Funding



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Master's Degree Program

# Data-driven Marketing

Specialization: **Customer Experience**

The Master's Degree Program in Data-driven Marketing, with a specialization in Customer Experience equips professionals to turn data into strategic insights and craft experiences that put the customer at the heart of marketing strategy. Designed to meet the challenges of the digital era, the program blends analytical thinking, strategic insight, and creativity, providing a solid, up-to-date foundation in Consumer Behavior, UX Research, marketing information management, and customer experience optimization across the entire journey. Students work on projects that integrate data analysis and market research to deliver innovative, results-driven solutions in real business contexts.

## Goals

The course aims to train specialists who are able to:

- Analyze consumer behavior and identify opportunities to enhance the customer experience;
- Plan and conduct market studies and applied marketing research;
- Apply analytical methodologies to support strategic decision-making;
- Integrate UX Research and CRM data into customer experience management;
- Implement data-driven loyalty and relationship marketing strategies.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Study plan

The academic component corresponds to 60 ECTS, including 41,5 in mandatory course units:

- Consumer Behavior;
- Experimental Design;
- Market Research;
- Descriptive Analytics in Marketing;
- Predictive Analytics in Marketing;
- UX Research.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Paulo Rita

## Support and Funding



For more information or to apply, please visit: [www.novaims.unl.pt/MDDM-CE](http://www.novaims.unl.pt/MDDM-CE)



## Master's Degree Program

# Data-driven Marketing

Specialization: **Data Science for Marketing**

The Master's Degree Program in Data-Driven Marketing, with a specialization in Data Science for Marketing, aims to fill a gap in the postgraduate training of marketing professionals who need to acquire new analytical skills with a cross-cutting approach to data science. This program is designed to provide excellent training, integrating key concepts and challenges for marketing decision-making across its strategic, innovation-driven, and methodological dimensions. It includes practical training focused on data processing (data science & big data), artificial intelligence (generative AI & machine learning), and the analysis of social networks and consumer behavior.

The diverse range of elective course units also allows students to strengthen theoretical and practical knowledge in various related areas, such as digital marketing, social media, e-commerce, and search engine optimization.

This master's program is offered in two formats:

- **Working Hours (WH):** primarily designed for young graduates and professionals who wish to study on a full-time basis;
- **After Working Hours (AWH):** particularly suited for professionals who want to balance their studies with their professional activity.

## Goals

The course aims to train specialists who are able to:

- Bridge the gap between marketing and data science, fostering critical thinking about data and drawing conclusions from incomplete information;
- Support marketing decision-making through a practical understanding of the fundamental methods, models, and tools used by data scientists;
- Develop the resources to load, clean, and transform data;
- Identify the best models and methodologies for extracting marketing knowledge from different data sources, which are often heterogeneous and complex;
- Understand the power of big data, obtaining business solutions and processing large streams of data in real time;
- Interpret and communicate data results using a wide range of real-world marketing examples;
- Face the challenges of the modern and dynamic business world.

## Study plan

The academic component corresponds to 60 ECTS, including 41 in mandatory course units:

- Big Data for Marketing;
- Data Science for Marketing;
- Machine Learning in Marketing;
- Marketing Engineering & Analytics;
- Marketing Strategy & Innovation;
- Social Network Analysis.

The remaining 19 ECTS correspond to electives chosen by students from a wide range of course units available on the program webpage.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Program coordinator

Paulo Rita

## Support and Funding



For more information or to apply, please visit: [www.novaims.unl.pt/MDDM-DS4M](http://www.novaims.unl.pt/MDDM-DS4M)



## Master's Degree Program

# Data-driven Marketing

Specialization: **Digital Marketing and Analytics**Postgraduate Program  
Digital Marketing and Analytics

#1 Portugal

Western  
#2 EuropeEDUNIVERSAL  
Best Masters  
Ranking 2025

The recent digital revolution has completely changed how people search for information, consume, interact, and learn. In response to this shift, marketing professionals increasingly use decision support systems to sustain their brands and products in the marketplace. The need to adopt analytical approaches to understand and create competitive advantages in this environment has gained greater importance.

The Master's Degree Program in Data-driven Marketing, with a specialization in Digital Marketing and Analytics, provides a solid training foundation to meet the new marketing challenges, which allows the development of a strategic and integrated customer vision – both offline and online – and contributes to the improvement of the decision-making process in companies.

This master's program is offered in two formats:

- **Working Hours (WH):** primarily designed for young graduates and professionals who wish to study on a full-time basis;
- **After Working Hours (AWH):** particularly suited for professionals who want to balance their studies with their professional activity.

## Goals

The course aims to train specialists who are able to:

- Understand digital marketing and its characteristics;
- Understand the operating principles of internet social media and methodologies for its use in creating value for business;
- Understand and apply analytical social media techniques;
- Understand the significance of web analytics;
- Master search engine marketing techniques, including AdWords campaign management and the development of search engine optimization (SEO) strategy.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Study plan

The academic component corresponds to 60 ECTS, including 41 in mandatory course units:

- Digital Analytics;
- Digital Marketing & E-Commerce;
- Marketing Engineering & Analytics;
- Marketing Strategy & Innovation;
- Search Engine Optimization;
- Social Media Analytics.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Paulo Rita

## Support and Funding



<https://recuperarportugal.gov.pt/>



For more information or to apply, please visit: [www.novaims.unl.pt/MDDM-DMA](http://www.novaims.unl.pt/MDDM-DMA)

## Master's Degree Program

# Data-driven Marketing

Specialization: **Marketing Intelligence**

The Master's Degree Program in Data-driven marketing, with a specialization in Marketing Intelligence, trains management, technical staff, and other marketing professionals to lead and guide the collection, organization, analysis, exploration, and dissemination of marketing information in organizations. The program provides a balanced curriculum with two components: one based on tools and methodologies of marketing management, and the other supported by information analysis and management methodologies and techniques.

This master's program is offered in two formats:

- **Working Hours (WH):** primarily designed for young graduates and professionals who wish to study on a full-time basis;
- **After Working Hours (AWH):** particularly suited for professionals who want to balance their studies with their professional activity.

## Goals

The course aims to train specialists who are able to:

- Develop strategies, methods, and instruments of marketing management;
- Understand client behavior and create and manage relationship policies;
- Master the processes and tools used for the storage, organization, and access to information for marketing in companies;
- Use several methodologies and tools for information exploration and analysis to minimize uncertainty in solving marketing problems.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation or a work project, and for the completion of the Research Methodologies Course Unit, total of 120 ECTS.

## Study plan

The academic component corresponds to 60 ECTS, including 41 in mandatory course units:

- Brand Management;
- Consumer Behavior Insights;
- Digital Marketing & E-Commerce;
- Marketing Engineering & Analytics;
- Marketing Research;
- Marketing Strategy & Innovation.

The remaining 19 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Paulo Rita

## Support and Funding







## Executive Master's Degree Program

# Marketing Analytics

The increasing digitalization of marketing and the growing need for a data-driven approach to decision-making make it essential to equip professionals in the field of Analytical Marketing. The Executive Master's Degree in Marketing Analytics is designed to prepare professionals to lead data-driven marketing strategies, leveraging emerging technologies, artificial intelligence, and neuromarketing to gain competitive advantages.

This executive program is aligned with current trends in digital marketing, customer insights, marketing automation, and machine learning, providing training that combines a strong practical component – with real case studies and applied projects – along with a solid theoretical foundation. The connection to the NOVA Marketing Analytics Lab ensures a dynamic learning environment, enabling the application of analytical strategies to real business challenges.

### Goals

The course aims to train specialists who are able to:

- Identify, collect, and visualize relevant marketing data;
- Apply advanced data analysis techniques to identify patterns and trends in consumer behavior;
- Develop data-driven and measurable omnichannel marketing strategies;
- Integrate artificial intelligence and machine learning into the optimization of marketing campaigns;
- Create and manage brand metrics, assessing impact and return on investment (ROI);
- Implement growth marketing strategies and automate digital marketing processes;
- Develop skills in neuromarketing to better understand consumer motivations and decision-making;
- Design and execute social media analytics and advanced digital marketing strategies.

### Study plan

The curricular component of this course consists of 8 course units::

- Brand Metrics and Marketing Analytics;
- Consumer Insights and Neuromarketing for Innovation;
- Data-driven based on Advanced Marketing Analytics;
- Digital Marketing and Social Media Analytics;
- Emerging Technologies and Artificial Intelligence;
- Leadership, Change and Impact;
- New Horizons;
- Strategic Growth in Marketing.

### Program coordinators

Diego Costa Pinto  
Paulo Rita

### Program length

Two semesters: one semester for the curricular component and one for the development of the final project, total of 60 ECTS.



## Postgraduate Program

# Digital Transformation

The Postgraduate Program in Digital Transformation recognizes the significance of digital transformation in today's business world. The program aims to strengthen NOVA IMS's training offer in this area by exploring technological advancements and processes that can help organizations enhance their competitive advantage through the transformation or development of their business models. As digital transformation becomes increasingly crucial for companies to remain relevant and competitive, the importance of training in this area cannot be overstated. By participating in this program, professionals will gain a deeper understanding and new skills that will enable them to leverage technology to drive business growth and create new opportunities.

### Goals

The course aims to train specialists who are able to:

- Train technicians and managers capable of formulating and evaluating digital transformation processes in organizations;
- Present solutions aimed at increasing productivity and efficiency in organizations with efficient and secure data management;
- Provide an overview of the latest trends and technologies in digital transformation, including artificial intelligence, big data, automation, and the cloud, among others.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 45 in mandatory course units:

- Business Impact of Digital Projects;
- Business Process Management;
- Change Management;
- Data Governance;
- Data Privacy, Security, and Ethics;
- Digital Transformation;
- E-Business;
- Emerging Technologies for Innovation;
- Industry 4.0;
- Information Management Systems.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

### Program coordinator

Fernando Bação



**Master's Degree Programs**  
Information Management

**Specialization**  
Information Systems  
Management

#1 Portugal

**Western**  
#1 **Europe**

EDUNIVERSAL  
**Best Masters**  
Ranking 2025

## Postgraduate Program

# Information Systems Management

The Postgraduate Program in Information Systems Management explores the various technologies in IT and their impact on planning, design, functionality, and information systems management. It also focuses on understanding the interaction between technology, business processes, strategy, and organizational policies. This program promotes strategic thinking in the role of information systems in developing management strategies and information sharing that can increase the competitiveness of organizations.

## Goals

The course aims to train specialists who are able to:

- Develop strategies, methods, and tools for knowledge and information systems management;
- Analyze the contexts of organizations and their significance in establishing innovative methods based on the most recent technological advances;
- Master the processes and tools used for the storage, organization, and access to information in organizations;
- Improve organizational efficiency through the creation and design of business processes;
- Create and develop information systems and technologies that meet organizations' information needs.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 41,5 in mandatory course units:

- Cybersecurity;
- Data Governance;
- Data Management and Storage;
- Data Privacy, Security and Ethics;
- Information Management Systems;
- Information Project Management;
- Information Systems Architectures;
- Information Systems Development;
- Information Systems Governance;
- Information Technologies Services Management.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Fernando Bação



## Master's Degree Program

# Information Management

Specialization: **Digital Transformation**

The Master's Degree Program in Information Management, with a specialization in Digital Transformation, acknowledges the significance of digital transformation in today's business world. The program aims to strengthen NOVA IMS' training offer in this area by exploring technological advancements and processes that can help organizations enhance their competitive advantage through the transformation or development of their business models. As digital transformation becomes increasingly crucial for companies to remain relevant and competitive, the importance of training in this area cannot be overstated. By participating in this program, professionals will gain a deeper understanding and competencies of how to leverage technology to drive business growth and create new opportunities.

### Goals

The course aims to train specialists who are able to:

- Formulate and evaluate digital transformation processes in organizations;
- Increase productivity and effectiveness in organizations through efficient and secure data management;
- Keep up with the latest trends and technologies in digital transformation, including artificial intelligence, big data, automation, and the cloud, among others.

### Program length

Three semesters: 2 for the curricular component and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature, and the completion of the Research Methodologies Course Unit, total of 95 ECTS.

### Study plan

The academic component corresponds to 60 ECTS, including 45 in mandatory course units:

- Business Impact of Digital Projects;
- Business Process Management;
- Change Management;
- Data Governance;
- Data Privacy, Security, and Ethics;
- Digital Transformation;
- E-Business;
- Emerging Technologies for Innovation;
- Industry 4.0;
- Information Management Systems.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

### Program coordinator

Fernando Bação



## Master's Degree Program

# Information Management

Specialization: **Information Systems Management**

The Master's Degree Program in Information Management, with a specialization in Information Systems Management, explores the various technologies in IT and their impact on planning, design, functionality, and information systems management. It also focuses on understanding the interaction between technology, business processes, strategy, and organizational policies. This program promotes strategic thinking in the role of information systems in developing management strategies and information sharing that can increase the competitiveness of organizations.

This program is offered in two formats:

- **Working Hours (WH):** aimed at young graduates and professionals who intend to study on a full-time basis;
- **After Working Hours (AWH):** particularly aimed at professionals who intend to make their studies compatible with their professional activity.

## Goals

The course aims to train specialists who are able to:

- Develop strategies, methods, and tools for knowledge and information systems management;
- Analyze the contexts of organizations and their significance in establishing innovative methods based on the most recent technological advances;
- Master the processes and tools used for the storage, organization, and access to information in organizations;
- Improve organizational efficiency through the creation and design of business processes;
- Create and develop information systems and technologies that meet organizations' information needs.

## Program length

Three semesters: 2 for the curricular component and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature, and the realization of the Research Methodologies Course Unit, total of 95 ECTS.

## Study plan

The academic component corresponds to 60 ECTS, including 41,5 in mandatory course units:

- Cybersecurity;
- Data Governance;
- Data Management and Storage;
- Data Privacy, Security and Ethics;
- Information Management Systems;
- Information Project Management;
- Information Systems Architectures;
- Information Systems Development;
- Information Systems Governance;
- Information Technologies Services Management.

The remaining 18,5 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Fernando Bação





## Master's Degree Program

# Information Systems Management

Successful entrepreneurs embrace the challenges of transitioning to an information society, building their careers and businesses on new insights in management, operations, and the application of information systems and technologies. Upon completing the master's program, students – whether entrepreneurs or information systems specialists – will be equipped to manage, advise, and contribute to the development and creative application of these technologies. They will also be prepared to lead information systems departments and drive strategic business renewal by restructuring processes and leveraging IT. This Master's confers a double degree: an M.Sc. in Information Management with a specialization in Information Systems Management from NOVA IMS, and an M.Sc. in Business Informatics from the School of Economics and Business of the University of Ljubljana.

### Goals

The course aims to train specialists who are able to:

- Understand the strategic benefits of successfully implementing information systems, the process of strategic planning, and the evaluation of business needs;
- Develop project management and capital budgeting skills to enable activity, program and project costing, control, and evaluation;
- Evaluate the impact and manage the change propelled by the introduction of information systems;
- Manage, advise, and participate in developing and applying information resources and managing changes towards the strategic renewal of business.

### Program length

Four semesters: 3 for the curricular component and 1 for the development of a scientific dissertation, total of 120 ECTS.

### Program coordinators

NOVA IMS: Fernando Bação

SEB LU: Peter Trkman

### Study plan

#### 1<sup>st</sup> (Fall) Semester at NOVA IMS (Lisbon)

- Data Governance;
- Data Management and Storage;
- Data Mining I;
- Data Privacy, Security and Ethics;
- Information Systems Development;
- Information Systems Governance;
- Information Technologies Services Management;
- Management of Information Systems.

#### 2<sup>nd</sup> (Spring) Semester at SEB LU (Ljubljana)

- Business Intelligence and Analytics;
- Business Skills Development 1;
- Digital Business;
- Optional Course Unit;
- Strategic Management 2.

#### 3<sup>rd</sup> (Fall) Semester at SEB LU

- Accounting Information for Decision Making;
- Business Process Management;
- Developing Software Solutions;
- Organization and Management;
- Research Methods and Techniques.

#### 4<sup>th</sup> (Spring) Semester at SEB LU / NOVA IMS(1)

- Master's Thesis (NOVA IMS).

<sup>(1)</sup> The student chooses where they want to spend the semester. The master's thesis will be developed following NOVA IMS standards, always under the joint supervision of Professors from the two institutions.

### Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/EMSISM](http://www.novaims.unl.pt/EMSISM)





## Postgraduate Program

# Data Science for Finance

The Postgraduate Program in Data Science for Finance is an innovative international training program that offers a quantitative and analytical approach to finance. It is designed for professionals in the financial sector seeking a more analytical approach to the areas of valuation of financial assets, trading, risk management, financial engineering, predictive models, and financial computing, among others. It also provides an understanding of the potential transformations in the financial industry resulting from the adoption of blockchain technology by Fintech & InsurTech. The program prepares senior management for successful careers in the areas of investment banking, asset management, hedge fund & investment advisory, risk management, sales and trading, hedge funds, financial engineering, financial technology, and consulting/advisory.

## Goals

The course aims to train specialists who are able to:

- Develop data-driven pricing & risk management models of both plain vanilla and exotic financial securities that compete with traditional model-based approaches;
- Develop data-driven models that explain the dynamics of financial asset prices;
- Implement and validate data models, machine learning, and deep learning methods in finance;
- Understand the potential transformations in the financial industry resulting from the adoption of blockchain technology to Fintech & InsurTech;
- Acquire and develop skills in the most popular programming languages in the financial industry (R, Python);
- Develop predictive analysis and trading models, sentiment analysis, financial fraud detection techniques, credit rating models, insurance pricing models, and customer segmentation methods.

## Study plan

To be awarded the postgraduate diploma, students must complete 12 course units:

- Algorithmic Trading & Market Microstructure;
- Asset Pricing & Portfolio Management;
- Computational Finance;
- Credit Risk Scoring;
- Decentralized Finance (DeFi) & CryptoAssets;
- Deep Learning Methods in Finance;
- Financial Derivatives & Risk Management;
- Fixed Income Securities;
- Insurance Data Science;
- Machine Learning in Finance;
- Text Mining.

## Program coordinator

Jorge Miguel Bravo

## Program length

Two semesters, total of 64 ECTS.



## Postgraduate Program

# Financial and Budgetary Management and Control

Developed in partnership with the Inspectorate General of Finance – Portuguese Audit Authority (IGF), the Postgraduate Program in Financial and Budgetary Management and Control aims to equip participants with a set of competencies in the field of financial management and control, which enable the development of new information management strategies relevant to the performance of roles in the financial and budgetary sphere.

### Goals

The course aims to train specialists who are able to:

- Work in public and private organizations based on solid theoretical and practical training;
- Follow the latest advances in management, control, and financial reporting with an integrated vision;
- Understand and analyze accounting and internal control systems in an integrated and interdisciplinary manner;
- Implement procedures that enable adequate management control

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 52,5 in mandatory course units:

- Analytic Methods;
- Audit Principles, Standards and Procedures;
- Budgetary Policy and Process;
- Financial Accounting;
- Public Accounting – SNC-AP;
- Public Procurement and Public-Private Partnerships;
- Sampling for Audit and Control.

The remaining 7,5 ECTS correspond to one elective course unit chosen by students from the following:

- Law Studies (basic training in the area of economics and/or management);
- Principles of Financial Management (basic training in the legal area).

### Program coordinator

Jorge Miguel Bravo

Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/GCFO](http://www.novaims.unl.pt/GCFO)



## Postgraduate Program

# Financial Markets and Risks

Resulting from a partnership between NOVA IMS and ISCTE Executive Education, the Postgraduate Program in Financial Markets and Risks combines a prestigious teaching staff that aligns scientific knowledge and rigor with practical experience. Its innovative, current, and practical approach provides professionals in the financial sector with specialized training in creating, analyzing, and evaluating financial instruments, with a particular focus on derivatives. Additionally, the program covers the identification and implementation of integrated techniques for analyzing and managing financial assets, liabilities, and financial risks.

### Goals

The course aims to train specialists who are able to:

- Analyze and critically assess the main financial products and instruments, with a particular focus on derivatives;
- Identify and develop integrated techniques for the analysis and management of different types of financial risk, both from the perspective of hedging and in conducting speculation and arbitrage operations;
- Take an active role in the analysis and decision-making processes related to asset and liability management, particularly in areas such as investment portfolio management, treasury, pension funds, and investment fund management;
- Develop financial innovation techniques and processes, including the creation and evaluation of new products, asset classes, and operations.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the postgraduate diploma, students must complete 12 course units, corresponding to 60 ECTS:

- Asset and Liability Management;
- Bond Markets;
- Company Valuation;
- Credit Risk;
- Data Science for Finance;
- Ethics in Financial Markets Seminar;
- Financial Derivatives;
- Financial Options and Structured Products;
- Foreign Exchange and Money Markets;
- Longevity-Linked Securities & Derivatives;
- Market Risk;
- Portfolio Management.

### Program coordinator

NOVA IMS: Jorge Miguel Bravo

ISCTE Executive Education: João Pedro Nunes

Partnership

**iscte** Executive  
Education



For more information or to apply, please visit: [www.novaims.unl.pt/MRF](http://www.novaims.unl.pt/MRF)



**Master's Degree Programs**  
Statistics and Information  
Management

**Specialization**  
Risk Analysis and Management

#2 Europe #1 Portugal

#2 **World**

EDUNIVERSAL  
**Best Masters  
Ranking 2025**

Postgraduate Program

# Risk Management

The Postgraduate Program in Risk Management prepares professionals to face the challenges of identifying, assessing, and managing risk in the financial sector. Aligned with international standards like those of the CFA Institute and GARP, it provides the essential knowledge for decision-making, in line with best practices and regulatory frameworks such as Basel III/IV and Solvency II. With an innovative curriculum, the program takes a hands-on, practice-oriented approach grounded in strong analytical foundations. The postgraduate incorporates advanced techniques in machine learning, deep learning, and AI, and explores how technologies like blockchain and artificial intelligence are reshaping the financial industry – from FinTech and InsurTech to RegTech, Decentralized Finance, and cryptoassets. This program evolved from the Postgraduate Program in Risk Analysis and Management.

## Goals

The course aims to train specialists who are able to:

- Understand operations and products that are part of the activity of financial institutions;
- Identify and quantify risks associated with financial institutions;
- Manage various current risks in institutions;
- Take decisions based on quantifying techniques of economic value;
- Manage the new European solvency systems for banking and insurance in a balanced way.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 45 in mandatory course units:

- Banking and Insurance Economics;
- Credit Risk Management;
- Financial Derivatives and Risk Management;
- Investments and Portfolio Management;
- Life Actuarial Techniques;
- Management of Market and Liquidity Risks;
- Predictive Analytics in Finance;
- Regulation and Supervision of Insurance and Banking;
- Non-Life Actuarial Techniques.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinators

NOVA IMS: Jorge Miguel Bravo

ISCTE Executive Education: João Pedro Nunes







## Master's Degree Program

# Risk Management

**Master's Degree Programs**  
Statistics and Information  
Management

**Specialization**  
Risk Analysis and Management

#2 Europe #1 Portugal

#2 **World**

EDUNIVERSAL  
**Best Masters  
Ranking 2025**

The Master's Degree Program in Risk Management prepares professionals to tackle the challenges of identifying, assessing, and managing risk in the financial sector. Aligned with international standards such as those of the CFA Institute and GARP, it delivers essential knowledge for sound decision-making, in line with best practices and regulatory frameworks like Basel III/IV and Solvency II. With an innovative curriculum, the program takes a hands-on, practice-oriented approach grounded in strong analytical foundations. It integrates advanced techniques in machine learning, deep learning, and AI, while also exploring the transformation of the financial industry driven by technologies such as blockchain and AI across FinTech, InsurTech, RegTech, Decentralized Finance, and cryptoassets. This program evolved from the Risk Analysis and Management specialization of the Master's in Statistics and Information Management.

## Goals

The course aims to train specialists who are able to:

- Understand operations and products that are part of the activity of financial institutions;
- Identify and quantify risks associated with financial institutions;
- Manage various current risks in institutions;
- Take decisions based on quantifying techniques of economic value;
- Manage in harmony with the new European banking and insurance solvency systems.

## Program length

Three semesters: 2 for the academic component, and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature and the completion of the Research Methodologies Course Unit, total of 95 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 45 in mandatory course units:

- Banking and Insurance Economics;
- Credit Risk Management;
- Financial Derivatives and Risk Management;
- Investments and Portfolio Management;
- Life Actuarial Techniques;
- Management of Market and Liquidity Risks;
- Predictive Analytics in Finance;
- Regulation and Supervision of Insurance and Banking;
- Non-Life Actuarial Techniques.

The remaining 15 ECTS correspond to electives chosen by the students from a wide range of course units available on the program webpage.

## Program coordinator

Jorge Miguel Bravo





Executive Postgraduate Program

# Fintech, Digital and Decentralized Finance

The rapid evolution of the financial sector, driven by digital and decentralized technologies, demands professionals who can understand and apply innovative solutions such as blockchain, artificial intelligence, and decentralized finance (DeFi). The Executive Master's in Fintech, Digital and Decentralized Finance addresses this need by training leaders and specialists to lead the digital transformation of financial services.

This program is aligned with emerging trends in Fintech and InsurTech, exploring technologies such as blockchain, cryptoassets, smart contracts, DeFi, and machine learning applied to finance. Its curriculum combines a strong practical component – including case studies and applied project development – with a solid theoretical foundation, enabling students to acquire strategic skills to drive innovation in the financial sector.

## Goals

The course aims to train specialists who are able to:

- Understand the impact of emerging technologies on the financial sector, including blockchain, cryptoassets, artificial intelligence, and smart contracts;
- Evaluate and apply Fintech and InsurTech solutions to transform traditional financial processes and promote innovative business models;
- Develop strategic skills in Decentralized Finance (DeFi), including lending protocols, stablecoins, decentralized exchanges, and blockchain-based insurance;
- Integrate artificial intelligence and machine learning into predictive analytics, risk management, and decision-making in the financial sector;
- Analyze the regulatory and tax frameworks surrounding Fintech and DeFi, ensuring compliance and mitigating operational risks;
- Design and implement digital innovation strategies in financial institutions, startups, and technology companies.

## Study plan

The curricular component of this program consists of 8 mandatory course:

- Blockchain Technology & Smart Contracts;
- CryptoAssets;
- Decentralized Finance;
- Fintech & InsurTech: Digital Transformation of Financial Services;
- Leadership, Change and Impact;
- Machine Learning and Artificial Intelligence;
- DeFi Regulation, Taxation and Risk Management;
- New Horizons.

## Program coordinator

Jorge Miguel Bravo

## Program length

Two semesters, one for the academic component, and another for the development of a work project, total of 60 ECTS.

## Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/MFDDF](http://www.novaims.unl.pt/MFDDF)



## Postgraduate Program

# Geographic Information Systems and Science

The Postgraduate Program in Geographic Information Systems and Science is developed within the UNIGIS International Association, a global network of universities that offer programs in Geographic Information Systems (GIS). The postgraduate program taught in b-learning and e-learning formats provides a technical and scientific framework related to the use of geographic information technology and analysis, with a particular emphasis on skills related to the modeling and analysis of spatial data and the design and planning of geographic information technology and analysis in organizations. This program gives access to the Geospatial Intelligence Certificate (GEOINT), accredited by the United States Geospatial Intelligence Foundation (USGIF), which recognizes advanced competencies in the application of geospatial methods and technologies to the analysis of global challenges in civil, institutional, and strategic contexts.

### Goals

The course aims to train specialists who are able to:

- Develop appropriate strategies, methodologies, and geographic information management tools for the analysis of questions raised when using this type of information;
- Model, monitor, and simulate geographic, demographic, and environmental phenomena in diverse analysis contexts;
- Use exploration and analysis methodologies and tools to reduce the levels of uncertainty related to the resolution of problems of a geographical nature;
- Design and develop information systems and technologies that meet the needs of geographic information within an organizational context.

### Program length

Two semesters, total of 60 ECTS.

### Study plan

To be awarded the Postgraduate Diploma, students must complete 60 ECTS, of which 7.5 are mandatory and correspond to the course unit Geographic Information Systems and Science. The course units offered in this program are:

- Cartographic Sciences and Data Acquisition;
- Geographical Information Systems and Science\*;
- Geospatial Databases;
- Geospatial Data Mining;
- Geospatial Intelligence (GEOINT);
- Geospatial Programming;
- GIS Modeling;
- GIS in Organizations;
- Programming for Geospatial Web Services;
- Remote Sensing;
- Spatial Data Analysis and Visualization;
- Spatial Statistics.

\* Mandatory course unit.

### Program coordinator

Marco Painho

Partnership



Accreditation



For more information or to apply, please visit: [www.novaims.unl.pt/CSIG](http://www.novaims.unl.pt/CSIG)



## Postgraduate Program

# Geospatial Data Science

The Postgraduate Program in Geospatial Data Science provides the necessary skills for the analysis, modeling, and visualization of geographic information. It aims to train professionals for the role of artificial intelligence, programming, and data mining in the development of solutions to challenges in the public and private sectors. Developed within the UNIGIS International Association, a global network of universities that offer programs in Geographic Information Systems (GIS), this program is taught in b-learning and e-learning format, and it gives access to the Geospatial Intelligence (GEOINT) certificate accredited by the United States Geospatial Intelligence Foundation (USGIF), which recognizes advanced competencies in the application of geospatial methods and technologies to the analysis of global challenges in civil, institutional, and strategic contexts.

## Goals

The course aims to train specialists who are able to:

- Understand and contribute to the significant technical and social challenges created by computing environments rich in geospatial data, including its architecture, integrity, and management;
- Understand how geospatial data can be acquired and used to support various analysis, modeling, and geovisualization processes in large data environments;
- Understand how artificial intelligence, programming, and data mining can be used to intelligently enhance the typical concepts and flows of geographic information science and thus provide institution-centric solutions to a wide variety of challenges and societal problems across the public and private sectors.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

The curricular component corresponds to 60 ECTS. In the e-learning format, 45 ECTS are mandatory and the remaining 15 correspond to elective course units, to be chosen by the students. The course units offered in this program are:

- Cartographic Sciences and Data Acquisition;
- Geographic Information Systems and Science\*;
- Geospatial Data Mining\*;
- Geospatial Intelligence (GEOINT);
- Geospatial Programming\*;
- GIS Modeling;
- GIS in Organizations;
- Programming for Geospatial Web Services;
- Remote Sensing\*;
- Spatial Databases\*;
- Spatial Data Analysis and Visualization;
- Spatial Statistics\*.

\*Mandatory Course Unit

## Program coordinator

Marco Painho

Partnership



Accreditation



For more information or to apply, please visit: [www.novaims.unl.pt/CDG](http://www.novaims.unl.pt/CDG)



## Master's Degree Program

# Geographic Information Systems and Science

Specialization: **Geographic Information Systems and Science**

The Master's Degree Program in Geographic Information Science and Systems (GISc) is developed within the framework of the UNIGIS International Association, a global university network offering master's programs in GIS. It is taught in both e-learning and blended learning formats.

The specialization in GISc aims to provide the technical and scientific foundation related to geographic information analysis and technology, with a particular emphasis on skills in spatial data modeling and analysis, as well as the design and implementation of GIS within organizations. This program also grants access to the Geospatial Intelligence (GEOINT) Certificate, accredited by the United States Geospatial Intelligence Foundation (USGIF), which recognizes advanced competencies in the application of geospatial methods and technologies to the analysis of global challenges in civil, institutional, and strategic contexts.

### Goals

The course aims to train specialists who are able to:

- Develop appropriate strategies, methodologies, and geographic information management tools for the analysis of questions raised when using this type of information;
- Model, monitor, and simulate geographic, demographic, and environmental phenomena in diverse analysis contexts;
- Use exploration and analysis methodologies and tools to reduce the levels of uncertainty related to the resolution of problems of a geographical nature;
- Design and develop information systems and technologies that meet the needs of geographic information within an organizational context.

### Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation, a work project, or a professional internship report, and the completion of the Final Project Supervision Course Unit (2 ECTS), total of 120 ECTS.

### Study plan

The curricular component corresponds to 60 ECTS, of which 7.5 are mandatory and correspond to the course unit Geographic Information Systems and Science. The course units offered in this program are:

- Cartographic Sciences and Data Acquisition;
- Geographical Information Systems and Science\*;
- Geospatial Databases;
- Geospatial Data Mining;
- Geospatial Intelligence (GEOINT);
- Geospatial Programming;
- GIS Modeling;
- GIS in Organizations;
- Programming for Geospatial Web Services;
- Remote Sensing;
- Spatial Data Analysis and Visualization;
- Spatial Statistics.

\* Mandatory course unit

### Program coordinator

Marco Painho

Partnership



Accreditation



For more information or to apply, please visit: [www.novaims.unl.pt/MCSIG](http://www.novaims.unl.pt/MCSIG)



Master's Degree Program

# Geographic Information Systems and Science

Specialization: **Geospatial Data Science**

The Master's Degree Program in Geographic Information Systems and Science is developed in collaboration with the UNIGIS International Association, a global network of universities offering Geographic Information Systems programs.

The specialization in Geospatial Data Science, taught in b-learning and e-learning formats, provides the necessary skills for analyzing, modeling, and visualizing geographic information. It aims to train professionals for roles involving artificial intelligence, programming, and data mining in the development of solutions to address challenges in the public and private sectors. This program gives access to the Geospatial Intelligence (GEOINT) Certificate accredited by the United States Geospatial Intelligence Foundation (USGIF), which recognizes advanced competencies in the application of geospatial methods and technologies to the analysis of global challenges in civil, institutional, and strategic contexts.

## Goals

The course aims to train specialists who are able to:

- Understand and contribute to the significant technical and social challenges created by computing environments rich in geospatial data, including its architecture, integrity, and management;
- Understand how geospatial data can be acquired and used to support various analysis, modeling, and geovisualization processes in large data environments;
- Understand how artificial intelligence, programming, and data mining can be used to intelligently enhance the typical concepts and flows of geographic information science and thus provide institution-centric solutions to a multitude of challenges and societal problems across public and private sectors.

## Program length

Four semesters: 2 for the academic component, and 2 for the development of a scientific dissertation, a work project, or a professional internship report, and the completion of the Final Project Supervision Course Unit (2 ECTS), total of 120 ECTS.

## Study plan

The curricular component corresponds to 60 ECTS. In the e-learning format, 45 ECTS are mandatory and the remaining 15 correspond to elective course units, to be chosen by the students. The course units offered in this program are:

- Cartographic Sciences and Data Acquisition;
- Computational Methods II;
- Geographic Information Systems and Science\*;
- Geospatial Data Mining\*;
- Geospatial Intelligence (GEOINT);
- Geospatial Programming\*;
- GIS Modeling;
- GIS in Organizations;
- Programming for Geospatial Web Services;
- Remote Sensing\*;
- Spatial Databases\*;
- Spatial Data Analysis and Visualization;
- Spatial Statistics\*.

\* Mandatory Course Unit

## Program coordinator

Marco Painho

Partnership



Accreditation



For more information or to apply, please visit: [www.novaims.unl.pt/MCDG](http://www.novaims.unl.pt/MCDG)



## Master's Degree Program

# Geospatial Technologies

The Master's in Geospatial Technologies (Erasmus Mundus Program) is a collaboration between:

- Universidade Nova de Lisboa (NOVA), NOVA Information Management School (NOVA IMS), Lisbon, Portugal;
- University of Münster (WWU), Institute for Geoinformatics (IFGI), Münster, Germany;
- Universitat Jaume I (UJI), Castellon, Spain.

This master's program has been selected by the Erasmus Mundus Program of the European Commission as one of the best master's programs in Europe.

## Goals

The course aims to train specialists who are able to:

- Apply data modeling skills;
- Understand the basics of geographic Information;
- Act based on knowledge of information technology, new media and fundamental concepts of geoinformatics;
- Resort to skills in geoinformatics, including basic and advanced modules;
- Manage programs and research methods.

## Program length

Three semesters: 2 for the academic component, and 1 for the development of a scientific dissertation, total of 90 ECTS.

## Program coordinator

Marco Painho

## Study plan

The program structure for the path starting at NOVA IMS is:

### Semester 1 – NOVA IMS

- Geographic Information Science\*;
- Geospatial Data Mining;
- Group Project Seminar on Programming and Analysis\*;
- Portuguese;
- Remote Sensing;
- Spatial Data Analysis and Visualization;
- Spatial Statistics.

### Semester 2 – University of Münster (WWU)

- Advanced Digital Cartography;
- Applied Geospatial Technologies;
- Core Topics in GI Science\*;
- From Data to Knowledge\*;
- Geoinformatics Forum\*;
- Geoinformatics Forum Discussion Group\*;
- Location-Based Services;
- Programming in GI;
- Project Management / Geomundus Conference\*;
- Reference Systems for GI;
- Research Methods in GI Science\*;
- Spatial Cognition.

### Semester 3 – NOVA IMS, WWU or UJI

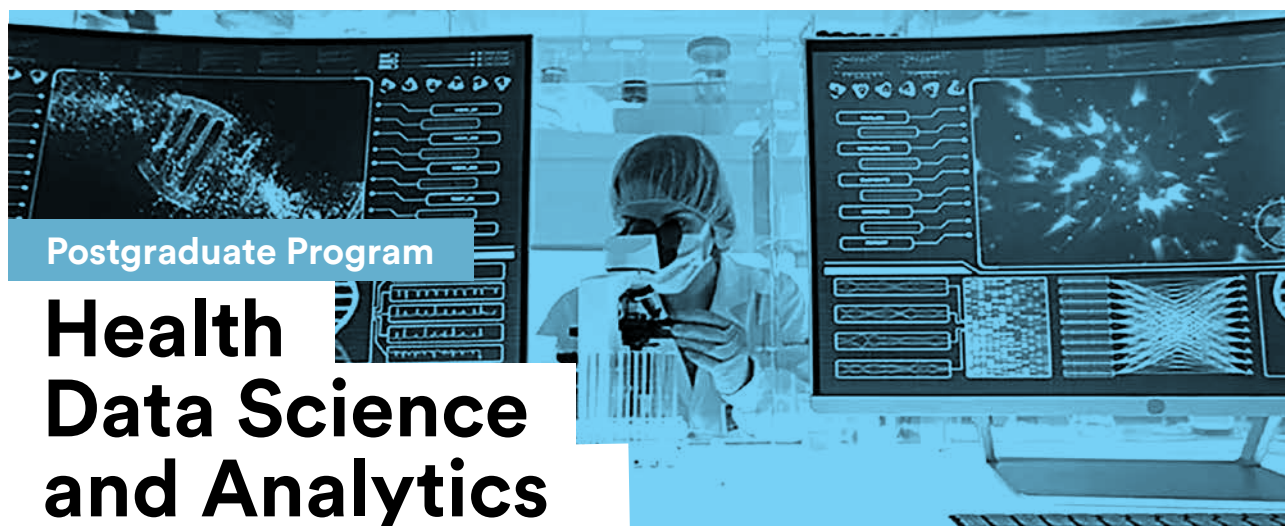
- Master's Thesis\*;
- Thesis follow up\*

\* Mandatory course unit

## Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/GEOTECH](http://www.novaims.unl.pt/GEOTECH)



## Postgraduate Program

# Health Data Science and Analytics

The Postgraduate Program in Health Data Science and Analytics is specifically designed for healthcare professionals who wish to acquire advanced skills in statistical methods and analytical tools essential for managing, interpreting, and making strategic data-driven decisions. This course promotes the development of core competencies in data interpretation, management, and decision-making based on real-world data, offering a hands-on learning experience aligned with the current needs of healthcare organizations.

With a flexible curriculum tailored to the personal and professional goals of each student, the program allows for a customized learning path, with elective course units in areas highly valued by the market – such as Data Science, Data Management, and the Health Sector – preparing students to address challenges in public health, biomedical sciences, and healthcare management.

## Goals

The course aims to train specialists who are able to:

- Transform data into strategic information to support decision-making in healthcare organizations;
- Understand emerging trends in digital transformation and new business models that are reshaping the sector;
- Apply data science to optimize processes, improve efficiency, and ensure the quality of health information;
- Master analytical tools for the collection, processing, interpretation, and visualization of healthcare data;
- Integrate analytical methods and data science into professional practice in the health sector.

## Program length

Two semesters, total of 60 ECTS.

## Program coordinator

Bruno Damásio

## Study plan

To be awarded the postgraduate diploma, students must successfully pass 60 ECTS, distributed across the main areas of the course (Data Science, Data Management, and Health Market) and elective course units. Students are required to complete at least 45 ECTS within the main areas (respecting the minimum ECTS required per area) and may take up to 15 additional ECTS in elective course units. The available course units are:

### Data Science

- Artificial Intelligence and Machine Learning in Health;
- Biostatistics, Epidemiology, and Public Health;
- Data Collection and Sampling for Health Data;
- Data Visualization;
- Health Data Analysis;
- Regression Analysis;
- Survival Analysis.

### Data Management

- Blockchain and Health Information Management;
- Databases and Digital Systems in Health;
- Python Programming.

### Health Market

- Clinical Trial Design;
- Innovation and Digital Transformation in Health;
- The New Health Market.

### Elective Course Units

- Analysis of Variance;
- Discrete Data Analysis;
- Forecasting Methods;
- Time Series Analysis.

Partnership



For more information or to apply, please visit: [www.novaims.unl.pt/HDSA](http://www.novaims.unl.pt/HDSA)



## Postgraduate Program

# Information Management and Business Intelligence in Healthcare

This program aims to complement the training of healthcare managers and professionals who wish to use information and knowledge management to enhance the competitiveness of healthcare organizations. The course covers a wide range of topics, from health and strategic policies to information systems and data science, to prepare future leaders in a dynamic and complex sector. The focus is to provide practical skills and tools that support innovation, process improvement, and better decision-making based on analytical and business intelligence tools.

To provide an interdisciplinary approach, the course is an initiative of four academic units of the Universidade Nova de Lisboa: NOVA IMS, National School of Public Health (ENSP-NOVA), NOVA Medical School (NMS | FCM), and Institute of Hygiene and Tropical Medicine (IHMT).

## Goals

The course aims to train specialists who are able to:

- Meet the challenges of the new healthcare market using planning and management control instruments in healthcare organizations;
- Know and manage the processes of innovation and change, as well as customer relationships in the new healthcare market;
- Introduce the principles of knowledge and information management to promote the competitiveness of organizations working in the health sector;
- Understand the process of Business Intelligence and manage its infrastructure components – people, processes, and technologies;
- Use analytical applications to monitor the performance of organizations, and identify key indicators of the analytical applications in healthcare.

## Program length

Two semesters, total of 60 ECTS.

## Study plan

To be awarded the postgraduate diploma, students must complete 60 ECTS, including 37,5 in mandatory course units:

- Business Intelligence;
- Innovation, Change Management and the New Healthcare Client;
- Leadership and People Management;
- New Healthcare Market;
- Planning and Management Control in Healthcare Organizations;
- Sustainable Healthcare.

The remaining 22,5 ECTS correspond to electives chosen by the students from a wide range of course units offered by NOVA IMS.

## Program coordinators

Guilherme Victorino  
José Carlos Caiado

Partnership



INSTITUTO DE HIGIENE E  
MEDICINA TROPICAL

Support



SPMS  
Serviços Partilhados do  
Ministério da Saúde



For more information or to apply, please visit: [www.novaims.unl.pt/GIBIS](http://www.novaims.unl.pt/GIBIS)



Master's Degree Program

# Statistics and Information Management

Specialization: **Health Data Science and Analytics**

The Master's in Statistics and Information Management, with a specialization in Health Data Science and Analytics is specifically designed for healthcare professionals who wish to acquire advanced skills in statistical methods and analytical tools essential for managing, interpreting, and making strategic data-driven decisions. This course promotes the development of core competencies in data interpretation, management, and decision-making based on real-world data, offering a hands-on learning experience aligned with the current needs of healthcare organizations. With a flexible curriculum tailored to the personal and professional goals of each student, the program allows for a customized learning path, with elective course units in areas highly valued by the market – such as Data Science, Data Management, and the Health Sector – preparing students to address challenges in public health, biomedical sciences, and healthcare management.

## Goals

The course aims to train specialists who are able to:

- Transform data into strategic information to support decision-making in healthcare organizations;
- Understand emerging trends in digital transformation and new business models that are reshaping the sector;
- Apply data science to optimize processes, improve efficiency, and ensure the quality of health information;
- Master analytical tools for the collection, processing, interpretation, and visualization of healthcare data;
- Integrate analytical methods and data science into professional practice in the health sector.

## Program length

Three semesters: 2 for the academic component, and 1 for the development of a scientific dissertation, a work project, or an internship report of a professional nature, and for the completion of the Research Methodologies Course Unit, total of 95 ECTS.

## Program coordinators

Bruno Damásio

## Study plan

The academic component corresponds to 60 ECTS, which are distributed across the main areas of the course (Data Science, Data Management, and Health Market) and elective course units. Students are required to complete at least 45 ECTS within the main areas (respecting the minimum ECTS required per area) and may take up to 15 additional ECTS in elective course units. The available course units are:

### Data Science

- Artificial Intelligence and Machine Learning in Health;
- Biostatistics, Epidemiology, and Public Health;
- Data Collection and Sampling for Health Data;
- Data Visualization;
- Health Data Analysis;
- Regression Analysis;
- Survival Analysis.

### Data Management

- Blockchain and Health Information Management;
- Databases and Digital Systems in Health;
- Python Programming.

### Health Market

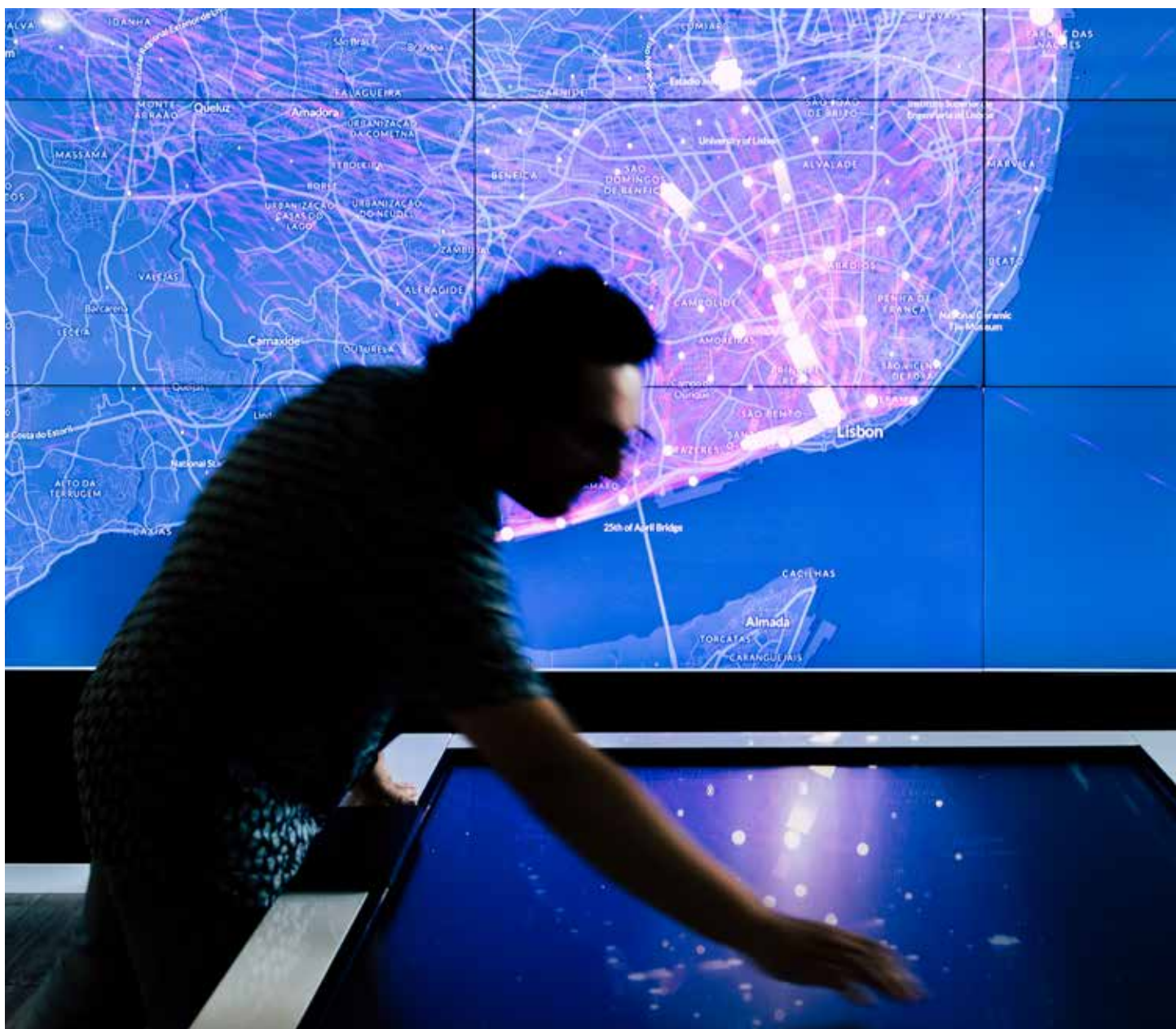
- Clinical Trial Design;
- Innovation and Digital Transformation in Health;
- The New Health Market.

### Elective Course Units

- Analysis of Variance;
- Discrete Data Analysis;
- Forecasting Methods;
- Time Series Analysis.







## Analytics Labs

NOVA IMS has 16 thematic and specialized laboratories supervised by researchers who are experts in their respective fields. These laboratories aim to serve as interfaces between the excellence of the research we conduct and external organizations, developing collaborative projects that enable knowledge transfer in close alignment with the specific needs of each business.

These laboratories support the development of joint projects across the different themes they cover, all sharing a common foundation: they are driven by Information Management and Data Science.



For more information or to apply, please visit: [www.novaims.unl.pt/laboratorios](http://www.novaims.unl.pt/laboratorios)



**NOVA data  
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powered by NOVA IMS

**nova  
cidade**  
urban analytics LAB  
powered by **NOVA**IMS

**NOVA center for  
global health** LAB  
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**NOVA tourism  
& hospitality  
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**NOVA Oeiras  
ocean  
analytics** LAB  
powered by NOVA IMS

**NOVA media  
& analytics** LAB  
powered by NOVA IMS

# Achievement Awards

At NOVA IMS, excellence is recognized, celebrated, and rewarded. The Merit Awards at NOVA IMS\* are not just symbolic acknowledgments, they are a tangible testament to the institution's commitment to nurturing and celebrating academic talent. These awards are granted to students who stand out for the excellence of their academic performance.

In 2024, we awarded approximately € 450,000 in merit prizes and scholarships.

These awards are made possible with the support of AD NOVA IMS Associates and other Partner Organizations that recognize and encourage academic excellence. We believe that, beyond highlighting students' dedication and academic success, these continuous personal and professional growth.



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\*The awards granted are subject to updates throughout the academic year, and additional prizes may be introduced in accordance with partnership agreements established between NOVA IMS and Supporting Organizations.

For more information about the awards, please visit: [www.novaims.unl.pt/premios-de-merito](http://www.novaims.unl.pt/premios-de-merito)



# Employability

NOVA IMS is proud to have contributed to the training of outstanding professionals for both national and international job markets. With a strong focus on promoting the employability of our students and ensuring a close connection with the business world, we have developed partnerships with companies and other public and private institutions.

To bring companies closer to our students and to support them throughout their professional journey, NOVA IMS offers a career support platform – the Career Center by Job-Teaser – through which students and alumni have access to exclusive job opportunities. The NOVA IMS Career Center currently includes more than 600 companies, over 260 of which are exclusive to NOVA IMS. In 2024 alone, around 450 exclusive job and internship offers were published.

**TAP**  
Air Portugal

**Nike**

**The Walt  
Disney  
Company**

**Tik Tok**

**L'Oréal**

**CUF**  
Hospitais  
e Clínicas

**Banco  
de  
Portugal**

**Nokia**

**European  
Comission**

Mercedes-Benz  
.io

**Accenture**

**Ageas  
Group**

**Revolut**

**FIFA**

**Delta  
Cafés**

**Nestlé**

**Jerónimo  
Martins**

**Apple**

**Super  
Bock  
Group**

**EDP**

**Caixa  
Geral  
de  
Depósitos**

**Câmara  
Municipal  
de Lisboa**

**Pfizer**

**NOS SGPS**

**Pestana  
Hotel  
Group**

**Amazon**

**Booking.com**

**Microsoft**

\*\*The organizations mentioned on this page were identified based on publicly available information, namely through the professional profiles of NOVA IMS students and alumni on social media platforms. This listing does not imply the existence of a formal partnership between these entities and NOVA IMS.





# Connection to Society

AD NOVA IMS is the Association for the Development of NOVA Information Management School. It is a non-profit institution with the status of a legal entity of public interest, established in October 1990.

It plays a crucial role in NOVA IMS's strategy by **connecting the academic world with society**, contributing to the development of activities related to **research, internationalization, funding for education, and the professional integration and employability of NOVA IMS students**.

AD NOVA IMS is currently composed of 10 public and private institutions that are actively involved in the academic life of NOVA IMS through various initiatives, such as the awarding of merit scholarships, internships, research projects, the organization of conferences and events, advanced training courses, and research seminars – responding to concrete needs within the business environment.

## Associate Partners:



For more information, please visit: [www.novaims.unl.pt/ad-nova-ims](http://www.novaims.unl.pt/ad-nova-ims)



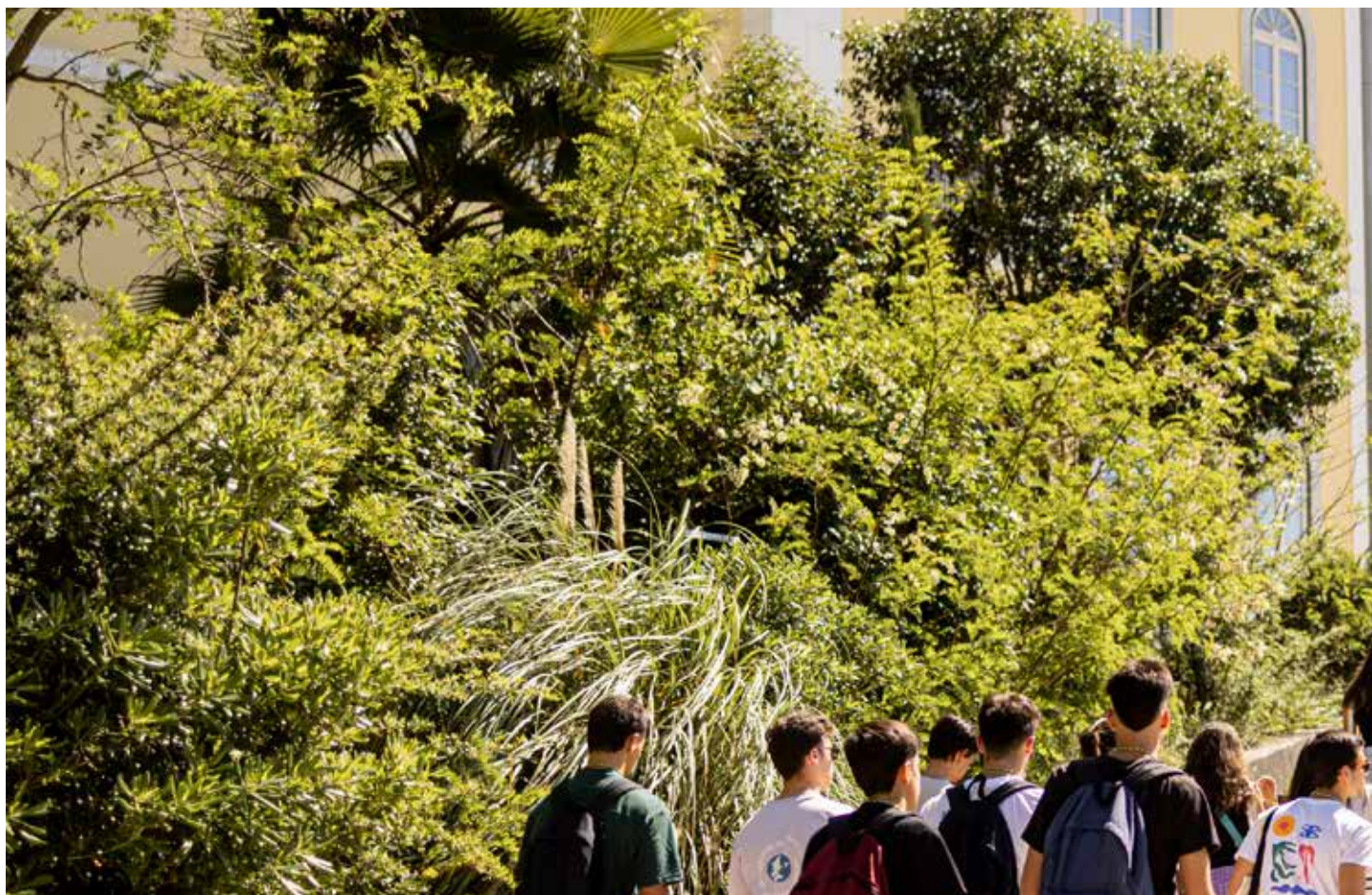


## Mobility

Through mobility programs, NOVA IMS students have the opportunity to attend a semester at a partner educational institution. Aware of the importance of fostering a culture of cooperation and mobility, NOVA IMS has established partnerships with numerous institutions.

Students may also apply for internship mobility, allowing them to carry out internships at companies and institutions in various program countries.





# Support Services

## Student Support Office

This office is available to receive suggestions, ideas, information requests, and complaints, ensuring follow-up and resolution with the relevant services. It is also the ideal place to clarify doubts and obtain useful information for your academic journey.

## Value Creation Office

It focuses on four areas: Career Design & Mentoring, Entrepreneurship, Knowledge Transfer, and Executive Education. Its goal is to promote innovation and create opportunities for students and organizations with initiatives based on the experience and knowledge of NOVA IMS.

## IT Services

They provide essential technological support for students' academic journey, with daily technical assistance, specialized software, and access to digital infrastructures. All students are entitled to a Microsoft® Office 365 account and access to over 150 free software programs available for teaching and research purposes.

## Academic Services

They support students throughout their academic journey, from academic guidance to managing exams for degree attainment. Through the Virtual Secretariat, students can access documents and regulations and request certificates without the need to visit the campus.

## Library and Documentation Services

Specializing in Information Management, they provide students with access to essential resources for their academic activities. They offer versatile study spaces and an up-to-date resource collection focusing on emerging scientific fields.

## Social Action Services

They support students with scholarships for financial hardship, accommodation for displaced students, access to cafeterias and bars, and medical, psychiatric, psychological, and nutritional consultations.







# Calendar and Contacts

## Calendar / Schedule

Classes begin in September and end in June of the following year, except for the postgraduate programs in: Artificial Intelligence for Business Transformation, Business Intelligence and Analytics for Hospitality & Tourism, Enterprise Data Science & Analytics, Information Management and Business Intelligence in Health, and Information Management and Security, which run from February to December.

Classes are held in the evening, with the exception of the Master's in Data Science and Advanced Analytics, which takes place during daytime hours.

The Master's in Information Management (with specializations in Business Intelligence and Information Systems Management) and the Master's in Data-Driven Marketing (with specializations in Data Science for Marketing, Digital Marketing & Analytics, and Marketing Intelligence) are offered in two formats: working hours and after working hours.

## Applications

Applications are submitted online at [www.candidaturas.novaims.unl.pt](http://www.candidaturas.novaims.unl.pt).

For information on application deadlines and tuition fees, please consult the "Admissions and Tuition Fees" section on each program's page on the NOVA IMS website.

## Contacts

If you would like more information about the programs offered by NOVA IMS, please contact:

### Admissions Office

[admissions@novaims.unl.pt](mailto:admissions@novaims.unl.pt)  
+351 213 828 610 (*option 2*)

## How to get to NOVA IMS

### Bus (Carris)

701, 713, 716, 726, 742, 746, 756, 758, 770

### Subway (Metro)

São Sebastião (Blue and red line)  
Praça de Espanha (Blue line)

### GPS Coordinates

38.732462 | -9.159921

### Address

Campus de Campolide,  
1070-312  
Lisboa, Portugal

### Phone

+351 213 828 610



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\*Western Europe

WORLD	#2	#7		
EUROPE	#2	#5	#1*	#1*
PORTUGAL	#1	#2	#1	#1

**MASTER'S PROGRAMS**

**Statistics and Information Management**  
Specialization:  
Risk Analysis and Management

**Data-Driven Marketing**  
Specialization:  
Marketing Intelligence

**Data Science and Advanced Analytics**

**Information Management**  
Specialization:  
Information Systems Management

WORLD	#2	#3		
EUROPE	#2	#3	#2*	#11*
PORTUGAL	#1	#1	#1	#2

**POSGRADUATE PROGRAMS**

**Information Management and Business Intelligence in Healthcare**

**Enterprise Data Science & Analytics**

**Digital Marketing and Analytics**

**Digital Enterprise Management**

NOVA IMS Accreditations and Certifications



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