NOVA IMS
INFORMATION MANAGEMENT SCHOOL

Data with Purpose.

POSTGRADUATE PROGRAM AND MASTER'S DEGREE SPECIALIZATION

Geospatial Data Science

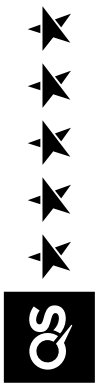
The program trains professionals to analyze, model, and visualize geographic information using artificial intelligence, programming, and data mining tools, fostering the development of innovative solutions that integrate technology, spatial data, and strategic intelligence.

Partnership
UNIGIS

Accreditation
USGIF

novaims.unl.pt

NOVA IMS was awarded 5 Stars in all categories by QS Stars - a mark of global excellence



POSTGRADUATE PROGRAM
AND MASTER'S DEGREE SPECIALIZATION

Geospatial Data Science

This program, offered in two formats – as a Postgraduate and as a Specialization of the Master's in Geographic Information Systems and Science, provides the skills needed for the analysis, modeling, and visualization of geographic information, preparing professionals to apply artificial intelligence, programming, and data mining in developing solutions to challenges across the public and private sectors. Developed within the framework of the UNIGIS International Association, a global university network offering master's degrees in Geospatial Information Systems (GIS), the program is delivered in both e-learning and blended formats and grants access to the Geospatial Intelligence (GEOINT) Certificate, accredited by the United States Geospatial Intelligence Foundation (USGIF).

Program goals

This program provides the knowledge and skills needed to:

- Understand and contribute to the great 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 public and private sectors.

Who is it for?

The program is designed to train managers and technical professionals capable of analyzing, modeling, and visualizing geographic information in data-intensive environments. It is intended for professionals and students located across Portugal, Brazil, Portuguese-speaking African countries, Timor-Leste, and Portuguese-speaking communities around the world who wish to pursue studies at a Portuguese higher education institution.

Format

Available in b-learning or e-learning formats.

Lenght

The Postgraduate Program takes place over two semesters, in a total of 60 ECTS. The Master's degree extends over four semesters, in a total of 120 ECTS.

Calendar/Schedule

The e-learning course units include four synchronous sessions (real-time virtual classes held online), always scheduled in the evening (from 8:00 p.m. to 10:00 p.m. GMT). In addition to an exam, all e-learning course units require an individual or group project and participation in online activities – the project must be presented individually at the end of each semester during the two annual Seminars. On-campus course units also take place in the evening.

For more information or to apply, please visit:
www.novaims.unl.pt/CDG

Admission Requirements

- Holding higher education level conferred on the 1st cycle of studies (undergraduates) under the Bologna legislation, by an adherent European country;
- Holding a foreign academic degree, approved by the Scientific Council of NOVA IMS, for achieving undergraduates' goals;
- Holding a relevant academic, professional and scientific curriculum, approved by the Scientific Council of NOVA IMS, for being able to conduct this study program.

Course Units

The curriculum of the first year (equivalent to the Postgraduate Program) corresponds to 60 ECTS. In the e-learning format, 45 ECTS are mandatory, and the remaining 15 correspond to elective course units chosen by the students. The course units offered are:

- **Cartographic Sciences and Data Acquisition;**
- **Computational Methods II;**
- **Geographic Information Systems and Science** [1][2]**;**
- **Geospatial Data Mining** [1][2]**;**
- **Geospatial Intelligence (GEOINT);**
- **Geospatial Programming** [1]**;**
- **GIS Modeling;**
- **GIS in Organizations;**
- **Programming for Geospatial Web Services;**
- **Remote Sensing** [1][2]**;**
- **Spatial Databases** [1]**;**
- **Spatial Data Analysis and Visualization** [2]**;**
- **Spatial Statistics** [1][2]**.**

In the Master's format, students must complete 60 additional ECTS distributed between the Final Project Supervision course unit (2 ECTS) and the development of either a scientific dissertation, an original project, or a professional internship accompanied by a final report (58 ECTS).

[1] Mandatory Course Unit
[2] Course unit offered in English

Program Coordinator



Prof. Dr. Marco Painho

GIS Software

As part of this program, students are given free access to Esri's ArcGIS software and, upon request, to Hexagon software. The program also places strong emphasis on open-source GIS software, which is introduced and encouraged for use across several course units.

GEOINT Certificate

The Graduate Certificate in Geospatial Intelligence (GEOINT), accredited by the United States Geospatial Intelligence Foundation (USGIF), provides advanced training in geospatial methods and technologies applied to addressing global challenges – from natural disasters and humanitarian crises to environmental risks and public health.
USGIF, a world leader and the only organization that grants academic accreditation in GEOINT, promotes professional excellence and collaboration among Industry, Academia, and Government.

Partnership Acreditation

UNIGIS

USGIF
United States Geospatial Intelligence Foundation

Contacts

For more information about this program, please contact our Admissions Office:

admissions@novaims.unl.pt
Tel: +351 213 828 610 (Option 2)

Campus de Campolide,
1070-312 Lisboa

AREA: GEO INFORMATICS AND ANALYTICS

NOVA IMS INFORMATION MANAGEMENT SCHOOL

EDUNIVERSAL

Best Masters Ranking 2025

#1 IN THE WORLD

MASTER'S PROGRAM

Information Management

Specialization
Business Intelligence

SEVEN TIMES IN A ROW Best. Again.

Nine NOVA IMS programs are among the best in the world. The Master's in Information Management – Business Intelligence is #1 worldwide in its category for the 7th edition in a row.

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

MASTER'S PROGRAMS

	Information Management and Business Intelligence in Healthcare	Enterprise Data Science & Analytics	Digital Marketing and Analytics	Digital Enterprise Management
WORLD	#2	#3		
EUROPE	#2	#3	#2*	#11*
PORTUGAL	#1	#1	#1	#2

POSGRADUATE PROGRAMS

*Western Europe

3rd edition

ACCREDITATIONS AND CERTIFICATIONS

eduniversal · QS STARS · iSchools · EMOS · UNIGIS · USGIF · Erasmus Mundus Programme Education and Culture DG · apcer · IQNet

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