Universitat de Girona

University Master's Degrees

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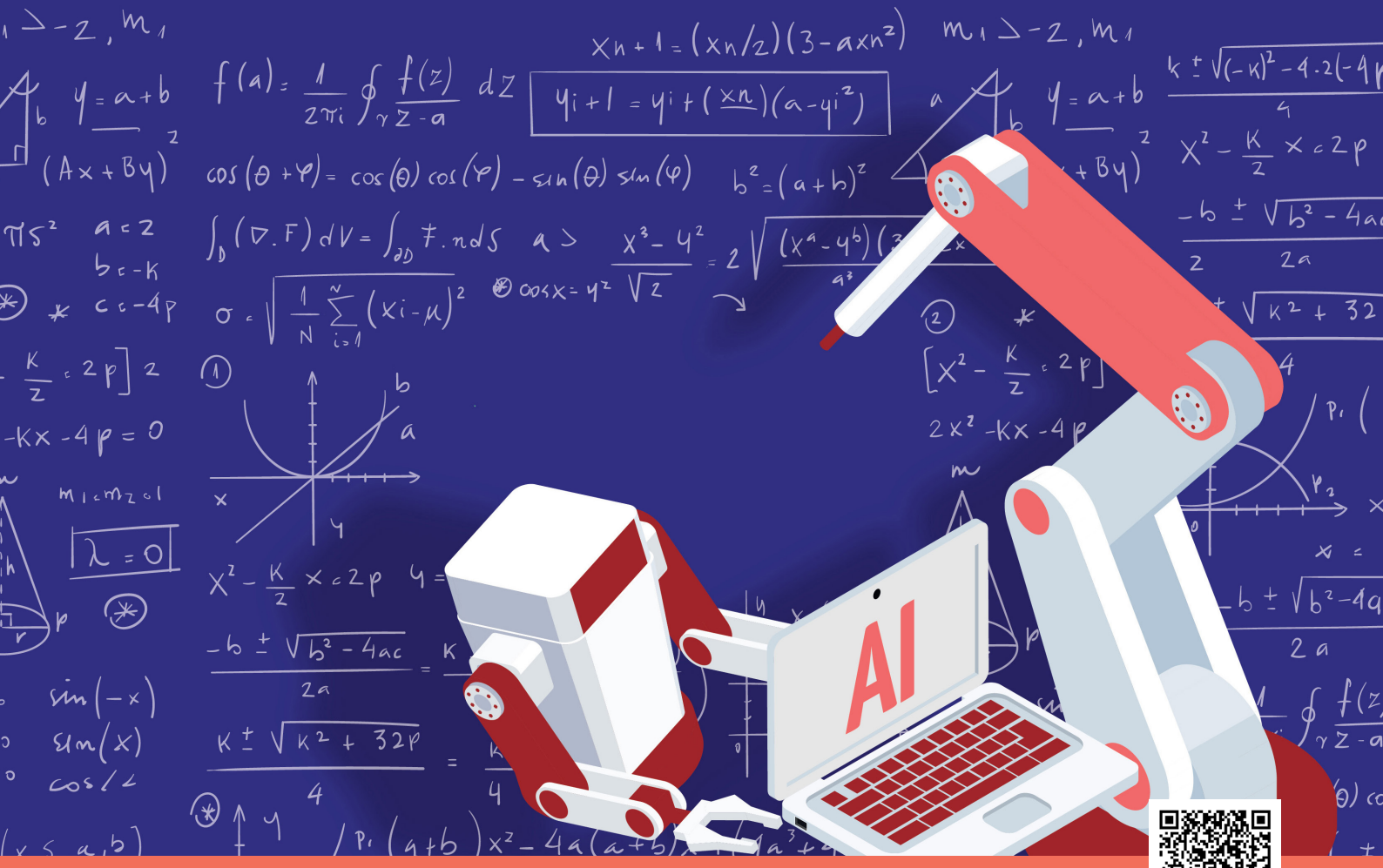
Master in Intelligent Robotic Systems (MIRS)



https://www.udg.edu/en/masters-en-tecnologia/mirs

Presentation

The **Master in Intelligent Robotic Systems (MIRS)** is a university master's program designed for a new generation of engineers who will be needed to develop innovative applications and tools to enhance the capabilities of intelligent robotic systems.

The development of these systems relies on cutting-edge technologies from **artificial intelligence, advanced sensing, autonomomy and control, manipulation**, and other rapidly evolving fields, all of which are driving the current digital revolution.

Objectives and Characteristics

The MIRS program is designed to equip graduates from diverse academic backgrounds—including **computer science; electrical, mechanical, or industrial engineering; physics; or mathematics**—with advanced knowledge and skills in three key areas: **robotics, artificial intelligence, and computer vision.**

This highly applied master's program emphasizes hands-on learning through **practical modules** while also providing the necessary **theoretical foundations** to develop expertise in the field.

Curricular Structure

Subjects	ECTS	Subjects	ECTS
First Year First Semester		First Year Second Semester	
Robot Manipulation	6	Hands-on Intervention	6
Probabilistic Robotics	6	Hands-on Localization	6
Autonomous Systems	6	Hands-on Perception	6
Multiview Geometry	6	Hands-on Planning	6
Machine Learning	6	Management and Entrepreneurship	3
		Writing & Research best practices in research	3
Second Year First Semester		Second Year Second Semester	
Statistics for Data Science	6	Master's Thesis	30
3D Perception and Sensor Fusion	7		
Object Detection and Segmentation	5		
Reinforcement Learning	6		
Advanced Machine Learning Techniques	6		

Master in Intelligent Robotic Systems

Type
University

Duration
120 credits (two academic years)

Mode of Study
Full-time

Academic Period
September-June

Language of Instruction
English (100%).
A B2 level of English or equivalent is recommended.

Number of Places
30 per year maximum

Fee
The academic prices of the official studies that are taught in the integrated centres of the UdG are public prices and every course the Government of Catalonia through the decree that is published fixes the month of June-July.

Scholarships
A limited number of scholarships will be offered to cover tuition fees. For more information, please contact *info.mirs@udg.edu.*

What will MIRS provide you with?

The **MIRS master's program** offers students the opportunity to complete a specialized master's in intelligent robotic systems entirely at the **University of Girona**, while also benefiting from collaboration with the **Erasmus Mundus IFROS** master's program, with which the first two semesters are shared. Coordinated by the University of Girona, IFROS involves the University of Zagreb (Croatia) and Eötvös Loránd University (Hungary).

Through this collaboration, MIRS fosters **synergies** between students of both programs and strengthens ties with the institutions associated with IFROS, thus promoting internationalization and academic excellence.

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