

# CENTRE FOR ADVANCED MEDICAL SIMULATION

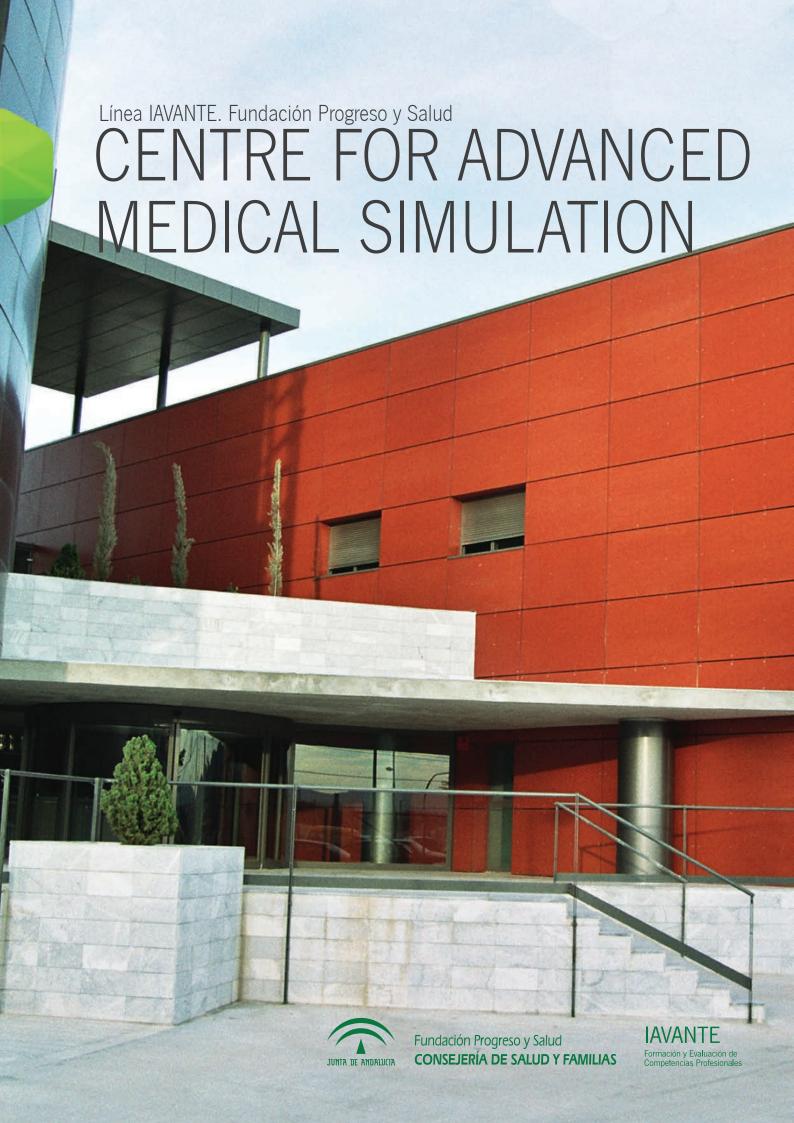




Fundación Progreso y Salud

CONSEJERÍA DE SALUD Y FAMILIAS

IAVANTE
Formación y Evaluación de
Competencias Profesionales





**IAVANTE**'s medical simulation centre is the greatest example of innovation in healthcare training where IAVANTE combines the most advanced simulation methodologies and tests new technologies applied to healthcare training.

Located in the Health Sciences Technology Park in Granada (Parque de la Salud), this is a unique and pioneering European Simulation Centre, leading the way in innovation in healthcare training. In our facilities we offer the most advanced simulation methodologies in high-fidelity scenarios which recreate natural healthcare environments.

We train professionals in realistic operating theatres, urban and home based care settings, programmed or emergency consultations, and critical care units, amongst others. The versatility of the simulation centre allows us to recreate any scenario from different contexts and medical specialties in a controlled environment.

## TRAINING MODEL

REALISTIC HEALTH-CARE **SCENARIOS** 

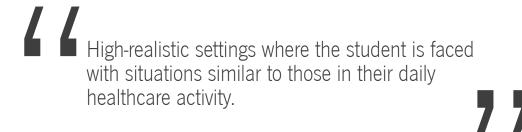


MOST INNOVATIVE **TRAINING METODOLOGIES** 

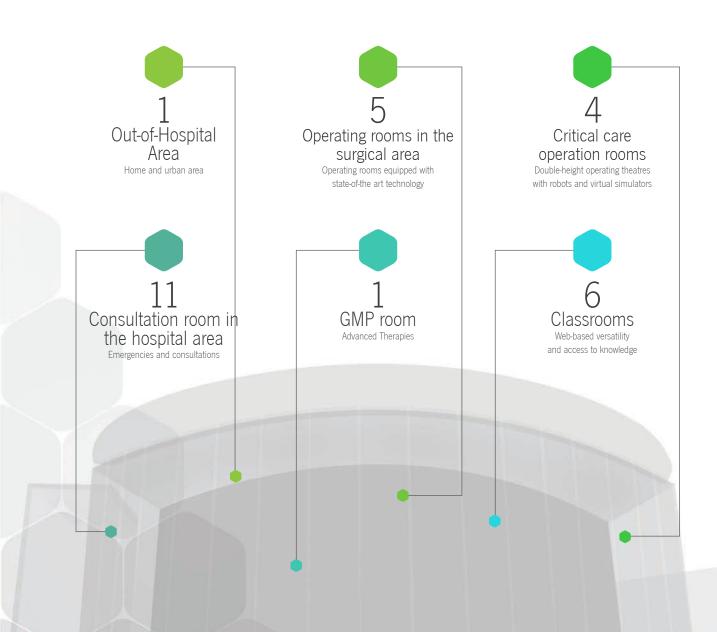








IAVANTE's Medical Simulation Centre offers a wide variety of training areas depending on each stage of the health care process in which the professional will be training. In this way, professionals can train in urban areas, home visits, programmed or emergency consultations, operating theatres and casualty areas, etc. All of them are settings that simulate real-life healthcare surroundings.







## Out-of-hospital area

#### Urban area & home

CMAT has an urban area where emergency professionals can train in health care procedures and techniques for patients outside health centres.

With the same objective in mind, the reproduction of a small home environment was planned where access difficulties and space conditions are similar to those encountered by casualty and emergency teams in their daily activities outside a hospital or health centre.

Training activities that make use of this type of settings incorporate a stage simulation methodology into their design. Patients simulated by actors interpret pathologies, while professionals undergoing training attend them and transfer them to an appropriate health centre.



## Surgical Area

#### State-of-the-art surgical rooms

CMAT has five multi-purpose experimental operating rooms equipped with the necessary electro-medical equipment for training in robotic surgery (using the da Vinci® Surgical System), endovascular techniques, laparoscopy and microsurgery, and state-of-the-art procedures as, among others, ecobroncoscopy, arthroscopy and dialytic therapies.

The operating rooms are high-fidelity, realistic settings where the student is faced with situations similar to those in their daily healthcare activity. Surgical interventions are performed on animal models or on human anatomical parts.

The surgical and anaesthetic equipment, wardrobe and other props, as well as real professionals fulfilling the roles of participants in the intervention immerses the student in a totally realistic environment and thus optimises learning outcomes.

In the surgical area there are ten stations equipped for experimental surgery; training in minimally invasive surgery can therefore be simultaneously provided to 20-25 surgeons at a time.



## Critical care area

# Double-height operating theatres with robots and virtual simulators

CMAT's critical care area has 4 multi-purpose operating theatres, where the specialization depends on the pathology to be treated.

In these critical care operating rooms, the most frequently used methodologies are robotic and virtual simulation, by which students face diagnosis and treatment by surgical technique through virtual or robotic simulation.





## Hospital area

#### Emergencies and consultation rooms

Located in the ground floor of the building is a hospital area designed as a typical hospital casualty area: a double circuit corridor with consultation rooms on both sides, where patients receive assistance according to their pathologies in one consulting room or another.

Patients (actors trained to simulate certain pathologies) gain access through one corridor and doctors (students wishing to train in diagnostic or relations skills with patients) through another.

In this area, rooms are multi-purpose and can be quickly transformed from orthopaedics to a gynaecological or ophthalmological consultation room, thanks to a versatile structure, educational equipment and the attrezzo used for identifying consultation rooms.



## GMP Room

#### Advanced therapies

The IAVANTE GMP room occupies 150 square metres of the CMAT facility and is a replica of the 12 cleanrooms that the Andalusian government plans to distribute in eight different centres belonging to the Andalusian public health system.

The aim is to exactly recreate the real conditions for the manufacture of advanced therapies medicines and increase the effectiveness of training programmes in the field of advanced therapies.

The innovative aspect of this room is that it is used exclusively for educational purposes in order to train professionals from various backgrounds (pharmacology, biology, biochemistry, medicine) on the manufacture of pharmaceuticals within the fields of cell therapy, gene therapy, tissue engineering and clinical research in advanced therapies.



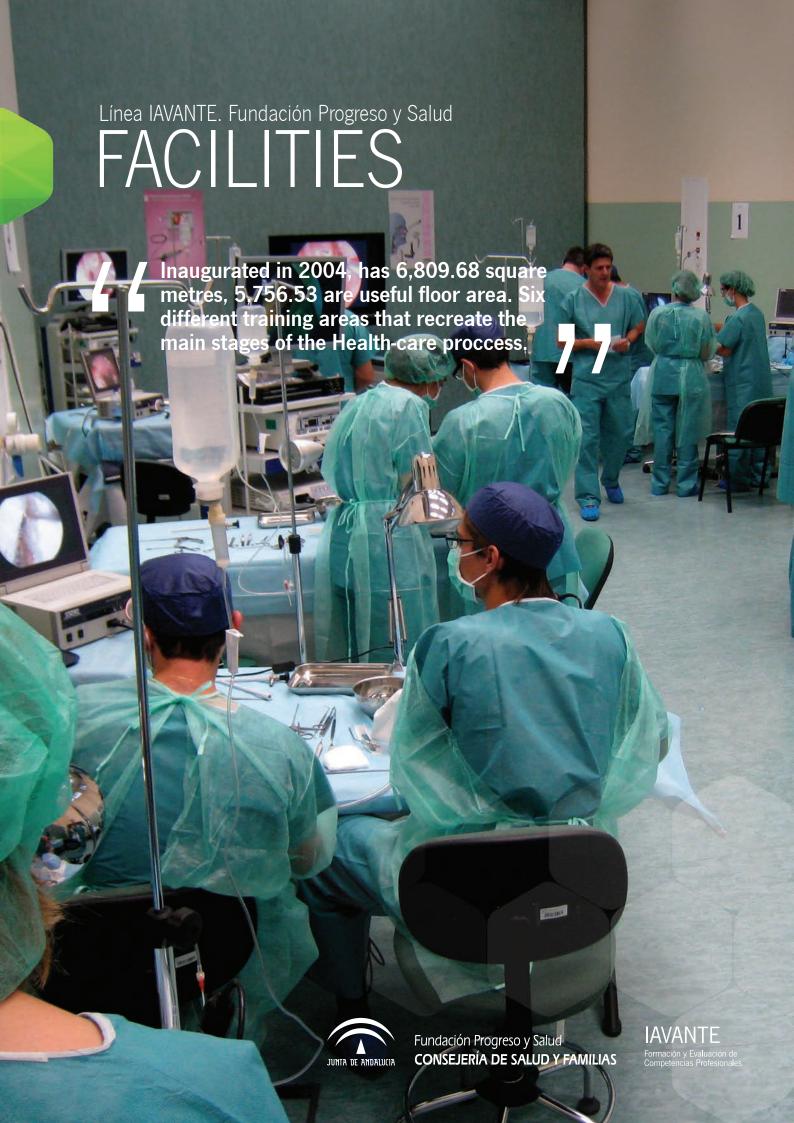
## Classrooms

#### Web-based versatility and access to knowledge

The classrooms at CMAT are very versatile and equipped with state-of-the-art technology to facilitate and speed up the knowledge transfer process. Touch screens are very helpful for this purpose.

Teachers can use them for projecting their presentations, consult the Internet, connect with students in other geographical areas by video conference and keep notes about each session, for example.

IAVANTE also places tele-workstations at the disposal of professionals from where they can access e-training tools, do exercises, consult tutors and access chats about training activities.



## OUT-OF-HOSPITAL AREA

Room	m <sup>2</sup>	capacity
STREET	232.70	80
HOME	9.50	10
STAIRS	8.38	10
LIFT	1.12	2

## SURGICAL AREA

Operating theatres	$m^2$	surgical stations	capacity
DR. FEDERICO OLÓRIZ	196.20	5	20
DR. GRANDE COVIÁN	196.20	5	20
DR. GÁLVEZ GINACHERO	196.20	1	8
DR. VARA LÓPEZ	196.20	5	20
DR. LAÍN ENTRALGO	196.20	5	20

## HOSPITAL AREA

$m^2$	capacity
14.67	10
15.47	10
15.90	10
15.90	10
15.90	10
14.08	10
14.01	10
21.45	18
19.44	18
14.08	8
13.17	8
15.43	10
16.09	10
	14.67 15.47 15.90 15.90 15.90 14.08 14.01 21.45 19.44 14.08 13.17

## CRITICAL CARE AREA

Surgical rooms	m2	capacity
DR. RAMÓN Y CAJAL	190.78	18
DR. SEVERO OCHOA	190.78	18
DR. MIGUEL SERVET	190.78	18
DR. GREGORIO MARAÑÓN	190.78	18

## CLASSROOMS

Classrooms	m2	capacity
AVERROES I	35.75	25
AVERROES II	38.08	25
AVERROES II	73.65	40
ABULCASIS	38.03	30
MAIMÓNIDES I	75.97	45
MAIMÓNIDES II	35.65	30



## SURGICAL EQUIPMENT

Type of equipment	Stations
DAVINCI ROBOTIC SURGERY SYSTEM	1
LAPAROSCOPY	6
ENDOSCOPY	6
ENDOVASCULAR TECHNIQUES (X-RAY)	2
ULTRASOUND SCAN	6
MICROSURGERY	11
ARTHROSCOPY	6
ENDOBRONCHIAL ULTRASOUND BRONCHOSCOPY	2

## ROBOTIC SIMULATOR

Type of simulator	Units
METIMAN ADULT AND PAEDIATRIC	1
SIMMAN	4
B.L.S. BABY MANNEQUIN	6
MEGACODE ADULT MANNEQUIN	7
MEGACODE ADULT MANNEQUIN W/ ARRHYTHMIA SIMULATOR	7
BABY MEGACODE MANNEQUIN	6
MEGACODE CHILD MANNEQUIN	5
B.L.S. CHILD MANNEQUIN	9
TRAUMA ADULT MANNEQUIN	2
TRAUMA ADULT MEGACODE	2
NURSING CARE MANNEQUIN	1
GERIATRICS CARE & AUSCULTATION MANNEQUIN	1
GERIATRICS CARE ADVANCED MANNEQUIN	1
GERIATRICS CARE MANNEQUIN	1
PREGNANT PACIENTE MANNEQUIN	1
RESUSCI ANNE S.E.D. MANNEQUIN	6
B.L.S. ADULT MANNEQUIN	8

## VIRTUAL SIMULATOR

Type of simulator	Units
BRONCHOSCOPY VIRTUAL SIMULATOR	2
GASTROSCOPY, COLONOSCOPY AND SIGMOIDOSCOPY VIRTUAL SIMULATOR	2
UROLOGY ENDOSCOPY VIRTUAL SIMULATOR	1
KIDNEY PERCUTANEOUS PUNCTURE VIRTUAL SIMULATOR	1
LAPAROSCOPIC SURGERY VIRTUAL SIMULATOR	2







## LOCATION

IAVANTE CENTRE FOR ADVANCED MEDICAL SIMULATION Parque Tecnológico de la Salud. Avda. de la Investigación n 21 18.016 - Granada - Spain Tel: +34 958 002250 | Fax: +34 958 002251

## **ACCREDITATIONS**

Our training is accredited by the Continuous Training Commission into the Spanish National Health System and the European Union of Medical Specialist (EUMS) at an european level.

We have also been accredited as a Continuous Education Center by the Agency for Healthcare Quality of Andalusia (ACSA) at an optimum level. All of our training activities are accredited by the Agency for Healthcare Quality of Andalusia.

## CONTACT

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