ADMISSION REQUIREMENTS

The access requirements to the University in order to obtain a degree are the following: holding a Bachillerato Certificate (Spanish Baccalaureate) and passing the Prueba de Evaluación de Bachillerato para el Acceso a la Universidad (Spanish University Entrance Examination), or holding the Ciclo Formativo de Grado Superior Certificate (Spanish Advanced Vocational Training Certificate); or holding the European Baccalaureate or International Baccalaureate Certificate; or having completed secondary education in EU countries or countries that have signed the corresponding specific bilateral agreements with Spain; or having foreign studies validated by the Spanish Ministry as equivalent to the Spanish Bachillerato; or having passed the University Entrance Tests or Procedures for people over 25, 40 or 45 years old.

Candidates fulfilling the above requirements wishing to raise their entrance marks (not applicable for candidates wishing to enter to the University by holding a completed University degree, those passing of the University Tests for people over 25, 40 or 45 years old, or holding a validated Baccalaureate Studies) can optionally pass during the University Entrance Examination an assessment test in up to 4 extra subjects. It is advisable to consult the weighting parameters of each subject for each Degree and the requirements and deadlines to participate in the different pre-registration procedure phases: Foreign Students Phase (March), Ordinary Phase (June) and Extraordinary Phase (September).
Further information on the website of the Andalusian Single District:
http://www.juntadeandalucia.es/economiayconocimiento/sguit/?q=grados

YOU CAN FIND MORE INFORMATION AT

http://www.us.es

http://estudiantes.us.es

http://cat.us.es

http://guiadeestudiantes.us.es

https://www.informatica.us.es/

http://www.us.es/estudios/grados/plan_226

YOU CAN FIND US IN

Higher Technical School of Computer Engineering.

Av. Reina Mercedes s/n, 41012 - Sevilla

T. 954 556 817

Correo-e.: info-eii@listas.us.es

Higher Technical School of Computer Engineering
Escuela Técnica Superior de Ingeniería Informática

ENGINEERING AND ARCHITECTURE

DEGREE IN HEALTHCARE ENGINEERING at the University of Málaga and at the University of Seville

GRADO EN INGENIERÍA DE LA SALUD por la Universidad de Sevilla y la Universidad de Málaga

ANDALUCÍA TECH
International Campus of Excellence

UNIVERSIDAD DE SEVILLA

DESCRIPTION

Quality medical practice could not be understood without the support of technological equipment capable of monitoring the physiological functions of patients and of assisting in the diagnosis of diseases. Knowledge of the basic notions of Biology and Medicine will enable future Health Engineers to better ascertain patients' needs, and, therefore, to optimize the operation of the health system and provide new solutions and instruments for their treatment.

The Degree in Health Engineering is structured into three items: Clinical Computing, Bioinformatics, and Biomedical Engineering.

The objective of this degree is to train professionals capable of projecting, directing and coordinating all those activities related to the application of Engineering to the field of Health. Likewise, the aim is to train graduates capable of directing and managing companies or departments applying the total quality criteria and respecting both people and the environment.

General Structure		Credits
Core		60
Compulsory		90
Optional		78
External Practice	Obligatory Practical Training (6 months)	Not Applicable
	Internships (Optional)	13.50
Final Degree Project		12

Course	Unit	Credits	Type
FIRST	Structural Biochemistry	6	Basic Training
	Physics I	6	Basic Training
	Fundamentals of Programming	6	Basic Training
	Physics II	6	Basic Training
	Linear Algebra	6	Basic Training
	Statistics	6	Basic Training
	Calculus	6	Basic Training
	Business Organization	6	Basic Training
	Object-Oriented Programming	6	Basic Training
	Advanced Studies of Calculus	6	Basic Training
SECOND	Computer Architecture and Operating Systems	6	Compulsory
	Advanced Studies of Mathematics	6	Compulsory
	Circuits and Electrical Machines	6	Compulsory
	Molecular Biology and Biochemistry	6	Compulsory
	Electronics	6	Compulsory
	Anatomy and Physiology	6	Compulsory
	Automatic Control	6	Compulsory
	Databases	6	Compulsory
	Cell Biology and Genetics	6	Compulsory
	Data Structures and Algorithms	6	Compulsory
THIRD	Software Engineering	6	Compulsory
	Security and Identity Managament	4.5	Optional
	Biomechanics II: Fluids	4.5	Optional
	Science and Strength of Materials	6	Optional
	Coding and Health Information Management	4.5	Optional
	Information Systems Infrastructure	6	Optional
	Design and Implementation of Clinical Information Systems	4.5	Optional
	Public Health and Health Organization	6	Optional
	Biomechanics I: Solid	4.5	Optional
	Biotechnology	4.5	Optional
	Biomaterials	4.5	Optional
	Advanced Software Engineering	6	Optional
	Data Mining	4.5	Optional
	Networks and Distributed Systems	6	Compulsory
	Fundamentals of Clinical Informatics	6	Compulsory
	Advanced Programming in Bioinformatics	4.5	Optional
	Intelligent Systems	6	Compulsory
	Advanced Analysis of Clinical Data	4.5	Optional
	Biomedical Imaging	6	Compulsory
	Genomics, Proteomics and Metabolomics	4.5	Optional
	Biomedical Instrumentation	6	Optional
	Algorithmic Techniques and Models	6	Optional
	Biological Databases	4.5	Optional
FOURTH	Service-Oriented Computing	4.5	Optional
	Biomedical Systems Modeling	4.5	Optional
	Medical Biosignals	4.5	Optional
	Rehabilitation Systems and Assistive Technologies	4.5	Optional
	Clinical Informatics Projects	4.5	Optional
	Telemedicine	4.5	Optional
	Systems Software and Architecture	6	Optional
	Hospital Facilities	6	Optional
	Tissue Engineering	4.5	Optional
	IT Project Management	4.5	Optional
	Clinical Data Mining	4.5	Optional
	Technologies for Electronic Administration	4.5	Optional
	Safety, Ethics and Regulation in Biomedical Engineering	4.5	Optional
	Biomedical Engineering Projects	4.5	Optional
	Bachelor\'s Thesis	12	Degree Project
	Cell and Tissue Biophysics	4.5	Optional
	Microtechnology and Nanotechnology in Biomedicine	4.5	Optional
	Supervised Training	13.5	Optional
	Information Systems for Tele-assistance and Remote Assistance	4.5	Optional
	Ethics and Health Legislation	4.5	Optional
	Change Management, Communication and Leadership	4.5	Optional
	Control Systems and Biomechatronics	4.5	Optional
	Communications Technology	4.5	Optional
	Medical Robotics	4.5	Optional
	Information Technology and Service Management	6	Optional
	Electromedicine	6	Optional

PROFESSIONAL OPPORTUNITIES

The purpose of the degree is to prepare and train professionals who will develop their professional activity in:

- Companies engaged in manufacturing and/or maintenance of diagnostic medical equipment or monitoring of patients and all related software.
- Biomedical research companies or teams, IT departments, clinical engineering departments, or electromedicine departments of hospitals.
- Companies in the ICT sector related to clinical information systems.
- Administration, advising on the definition of strategic policies related to technology and innovation in public health centers.
- Information Technology Consulting for Health.
- Bioinformatic software development companies for sequencing machines.
- Biotechnology companies and those involved in drug development.
- Companies dedicated to the development of prostheses and other disability-assistance systems.
- Companies related with management and computer analysis of biological data.

FURTHER STUDIES

The completion of this degree provides preferential access to following Master's Degrees: Biomedical Research; Medical Research: Clinical and Experimental; Teaching in Secondary Schools, Vocational Training and Language Centers (Biology and Geology / Technology and Industrial Processes); Tourism Management and Planning.