FACULTY
OF INFORMATICS

Informatics Engineering

www.ehu.eus

BASQUE YOURSELF

Would you like to live an international experience during your university studies? If so, the University of the Basque Country is an excellent choice.

Our university is the Basque Country´s largest higher education institution. Structured in three campuses -covering the three Basque territories-, our community of students, lecturers and researchers aggregates 60,000 fellows.

Ranked among the top 500 world universities, the University of the Basque Country is a multilingual institution where Spanish, Basque and English are equally spoken. After exhaustive assessment of our activity, we were accredited Campus of International Excellence by the Spanish Ministry of Education. Boosted by this recognition, we aspire to even higher goals: becoming one of Europe´s best.

If you are interested in building on your academic and professional qualifications, the University of the Basque Country can offer you a positive learning environment, optimal technical and human resources and above all the prestige of a university committed to excellence and innovation in teaching. Come and basque yourself.

The Basque Country (Euskadi)

The University of the Basque Country is structured in 3 campuses: the Campus of Araba, the Campus of Biscay and that of Gipuzkoa.

CAMPUS OF GIPUZKOA

It is composed of 9 Faculties and Schools; while the vast majority is located in Donostia/San Sebastián, we also have an Engineering Section in Eibar (40 km South-East from San Sebastián).

Capital of Gipuzkoa: Donostia/San Sebastián (182,930 inhabitants).

www.donostia.org

INTRODUCTION TO THE FACULTY

The Faculty of Informatics, located in San Sebastián, is the UPV/EHU reference centre in information technology. We offer a Bachelor´s Degree in informatics engineering, 3 Master's Degrees and 2 Doctoral programmes with a quality certification. We are a cutting-edge institution in research, with 98 faculty members and 68 researchers.

INFRASTRUCTURE

- 21 teaching laboratories, with specific installations for networks, mobile robots, microprocessors, graphics...
- 18 research laboratories
- 5 meeting rooms
- 24-hour computer room
- Study room and undergraduate thesis workroom
- Business Junior (Magnasis)
- Photocopying services
- Canteen, dining hall and lockers
- WIFI throughout the campus

CONTACT

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MULTILINGUALISM

The entire second year (60 credits) may be taken in English language, along with the undergraduate thesis. Three fourth-year elective subjects are also offered in English (see curriculum plan). Moreover, we have a set of 23 EFC (English- Friendly Course) subjects for those students whose Spanish is insufficient, in which the teachers are willing to tutor, conduct examinations and accept papers in English, although classes are given in Spanish. The other subjects are taught in Spanish and Euskera.

EXCHANGE PROGRAMMES

You can access our faculty over the following exchange programmes:

- Erasmus+ Programme
- UPV/EHU-Latin America Programme and Other Destinations Programme
- Double degree with IUT Bayonne to obtain the "Licence Professionnelle, Métiers du Numérique: Conception, Rédaction et Réalisation Web"

RESEARCH

Research has always been present at the Faculty of Informatics, where almost all the staff holds a PhD. There are currently 18 research groups based in the Faculty, with a total of 155 researchers.

As a result of this research activity there are about 20 thesis dissertations every year. Since 1980, there have been a total of 250 PhD. The research groups participate in European, national and local research projects (around 50 projects a year).

> One of the three oldest Faculties of Informatics in Spain

> Relations with over 70 companies in the nearby

> A degree with great practical content

BACHELOR´S DEGREE IN INFORMATICS ENGINEERING

Field of knowledge: Engineering and Architecture

Under the Informatics Engineering degree in our Faculty, you will be able to specialise in Computation, Computer Engineering or Software Engineering. You will also be trained to work independently or as a multidisciplinary team member.

This degree will train you to...

Design, develop and maintain computer systems, services and applications, develop centralised or distributed computer systems or architecture, integrate hardware, software and networks, plan projects in the area of computer engineering, evaluate accessibility, ergonomics, usability and security, and resolve problems through initiative, decision-making, independence and creativity.

We recommend a B2 level in the language to be used for the studies.

The deadline for document submission is:

- First semester. 30 June
- Second semester. 30 November

The Faculty assigns a lecturer as tutor to each exchange student to advise him/her on any academic matter during his/her stay. Moreover, the Universidad del País Vasco / Euskal Herriko Unibertsitatea (UPV/EHU) has a buddy programme that assigns a local student partner to help during the first few weeks of the mobility programme.

All this, along with the integration of exchange students in classes with local students, helps to improve the student experience in our Faculty.

Useful information for visiting students

Students are admitted to all undergraduate subjects and some master subjects provided they meet the language requirement and slots are available.

The University of the Basque Country also offers Spanish and Basque courses for visiting students. All related information may be obtained by writing to **cursosidiomas@ehu.eus.**

CURRICULUM PLAN

FIRST YEAR 60 credits

Fall semester

- Análisis Matemático
- Fundamentos de Tecnología de Computadores
- Matemática Discreta
- Principios de Diseño de Sistemas Digitales
- Programación Básica

Spring semester

- Álgebra
- Cálculo
- Estructura de Computadores
- Metodología de la Programación
- Programación Modular y Orientación a Objetos

SECOND YEAR 60 credits

Fall semester

- *Computer architecture*
- *Economy and business administration*
- *Data structures and algorithms*
- *Languages, computation and intelligent systems*
- *Statistical methods in engineering*

Spring semester

- *Databases*
- *Software engineering I*
- *Introduction to computer networks*
- *Introduction to operating systems*
- *Operations research*

THIRD YEAR 60 credits

Fall semester

- Servicios y Aplicaciones en Red

3rd & 4th year electives
- Computación Científica (M1)
- Gráficos por Computador (M1)
- Minería de Datos (M1)
- Modelos Abstractos de Cómputo (M1)
- Procesadores de Alto Rendimiento (M2)
- Sistemas Operativos (M2)
- Administración de Sistemas y Redes (M2)
- Diseño y Construcción de Sistemas Digitales (M2)
- Diseño de Bases de Datos (M3)
- Ingeniería del Software II (M3)
- Interacción Persona Computador (M3)
- Sistemas Web (M3)

Spring semester

- Gestión de Proyectos

3rd & 4th year electives
- Compilación (M1)
- Diseño de Algoritmos (M1)
- Inteligencia Artificial (M1)
- Visualización y Entornos Virtuales (M1)
- Diseño de Sistemas Empotrados (M2)
- Sistemas de Cómputo Paralelo (M2)
- Tecnologías e Infraestructuras de Red (M2)
- Evaluación del Rendimiento de Sistemas Informáticos (M2)
- Calidad del Software (M3)
- Desarrollo Industrial del Software (M3)
- Gestión Avanzada de Información (M3)
- Herramientas Avanzadas de Desarrollo de Software (M3)

FOURTH YEAR 60 credits

Fall semester

Electives
- *Advanced Techniques in Artificial Intelligence*
- Diseño y Proyectos de Redes
- Ingeniería de Control
- *Machine Learning and Neural Networks*
- Métodos Formales de Desarrollo de Software
- Norma y Uso de la Lengua Vasca
- Procesado Digital de Sonido e Imagen
- Programación Funcional
- Robótica, Sensores y Actuadores
- Sistemas Basados en el Conocimiento
- Sistemas de Gestión de Seguridad de Sistemas de Información
- Sistemas Distribuidos
- Visión por Computador

Spring semester

Electives
- Administración de Bases de Datos
- Electrónica Aplicada al Tratamiento de Datos
- Lingüística Aplicada
- Modelado 3D
- Programación Lógica
- Seguridad, Rendimiento y Disponibilidad de Servicios e Infraestructuras

UNDERGRADUATE THESIS

MAJOR FIELDS OF STUDY

- *Computation (M1)*
- *Computer Engineering (M2)*
- *Software Engineering (M3)*
- ** English courses highlighted in bold*