Data Science and Engineering Degree
Course 26/27

IMPORTANT: this list is not a guarantee of place availability, only the LA signed can be taken as a confirmation. The English support means simply good will intention, cannot be taken as an obligation for the teachers.

The total duration of the degree is 4 academic courses (8 semesters):

- Autumn (non semesters) from September to January.
- Summer (even semesters) from February to June.

Most regular subjects are 6 ECTS (3 lectures + 3 lab) and the instruction language is **Spanish**. Some teachers, voluntary, are willing to attend students in **English for tutorial support, off-timetable**.

The first three courses include mandatory subjects while in the last one some optional subjects are available. Special conditions apply to Internships (12 ECTS) and Final Degree Thesis (24 ECTS).

FIRST COURSE:

Code	Subject	Description	Sem.	Teaching Lang.	Exam / assignments in English	Tutorial support English
40362	ÁLGEBRA Y GEOMETRÍA	Algebra and Geometry	Aut.	Spanish	No	Yes
40363	MATEMÁTICA DISCRETA	Discrete mathematics	Aut.	Spanish	Yes	Yes
40364	FUNDAMENTOS DE PROGRAMACIÓN I	Programming fundamentals 1	Aut.	Spanish	No	Yes
40365	INGENIERÍA DE COMPUTADORES I	Computer engineering 1	Aut.	Spanish	Yes	Yes
40366	MÉTODOS ESTADÍSTICOS I	Statistical methods 1	Aut.	Spanish	Yes	Yes
40367	MATEMÁTICAS PARA LA COMPUTACIÓN	Mathematics for computation	Sum.	Spanish	No	Yes
40368	LA EMPRESA Y SUS PROCESOS	The enterprise and its processes	Sum.	Spanish	No	No
40369	FUNDAMENTOS DE PROGRAMACIÓN II	Programming fundamentals 2	Sum.	Spanish	No	No
40370	INGENIERÍA DE COMPUTADORES II	Computer engineering 2	Sum.	Spanish	Yes	Yes
40371	MÉTODOS ESTADÍSTICOS II	Statistical methods 2	Sum.	Spanish	Yes	Yes

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SECOND COURSE:

Code	Subject	Description	Sem.	Teaching Lang.	Exam / assignments in English	Tutorial support English
40381	ANÁLISIS EXPLORATORIO DE DATOS Y VISUALIZACIÓN	Exploratory data analysis and visualization	Aut.	Spanish B1 required	No	No
40380	APRENDIZAJE AUTOMÁTICO I	Machine learning 1	Sum.	Spanish	Yes	Yes
40379	BASES DE DATOS I	Databases 1	Sum.	Spanish	No	No
40378	CIENCIA DE DATOS EN EMPRESAS Y FINANZAS	Data science in companies and finances	Sum.	Spanish	Yes	Yes
40374	DESARROLLO DE APLICACIONES PARA CIENCIA DE DATOS	Application development for data science	Sum.	Spanish	Yes	Yes
40372	FUNDAMENTOS DE LOS SISTEMAS INTELIGENTES	Intelligent systems fundamentals	Aut.	Spanish	Yes	Yes
40373	FUNDAMENTOS DE MARKETING Y COMPORTAMIENTO DEL CONSUMIDOR	Marketing fundamentals and consumer behaviour	Aut.	Spanish	No	Yes
40376	HABILIDADES PROFESIONALES PARA INGENIEROS	Professional skills for engineers	Aut.	English	Yes	Yes
40375	INGENIERÍA DEL SOFTWARE	Software engineering	Aut.	Spanish	Yes	Yes
40377	INTELIGENCIA ARTIFICIAL PARA CIENCIA DE DATOS	Artificial intelligence for data science	Sum.	Spanish	Not guaranteed	Yes

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THIRD COURSE:

Code	Subject	Description	Sem.	Teaching Lang.	Exam / assignments in English	Tutorial support English
~~40387~~	~~ADMINISTRACIÓN DE SERVICIOS EN RED~~	~~Network services administration~~	~~Sum.~~	~~Spanish~~	~~-~~	~~-~~
40383	ADMINISTRACIÓN DE SISTEMAS OPERATIVOS	Operating systems administration	Aut.	Spanish	Partially	Yes
40385	APRENDIZAJE AUTOMÁTICO II	Machine learning 2	Aut.	Spanish	Yes	Yes
40384	BASES DE DATOS II	Databases 2	Aut.	Spanish	No	No
40389	BASES DE DATOS NO RELACIONALES	Non relational databases	Sum.	Spanish	Only exams	Yes
40386	BIG DATA	Big Data	Aut.	English	Yes	Yes
40382	OPTIMIZACIÓN Y HEURÍSTICA	Optimization and heuristics	Aut.	Spanish	No	Yes
~~40463~~	~~PRÁCTICAS EXTERNAS*~~	~~External placement [12 ECTS]~~	~~Sum.~~	~~Spanish~~	~~-~~	~~-~~
~~40388~~	~~VIRTUALIZACIÓN Y PROCESAMIENTO DISTRIBUIDO~~	~~Virtualization and distributed processing~~	~~Sum.~~	~~Spanish~~	~~-~~	~~-~~

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FOURTH COURSE:

Code	Subject	Description	Sem.	Teaching Lang.	Exam / assignments in English	Tutorial support English
40396	PROCESAMIENTO DE IMÁGENES, AUDIO y VÍDEO	Image, audio and video processing	Aut.	Spanish	Yes	Yes
40397	BIOINFORMÁTICA	Bioinformatics	Aut.	Spanish	Yes	Yes
~~40392~~	~~CIENCIA DE DATOS EN GRANDES ORGANIZACIONES~~	~~Data science in big corporations~~	~~Aut.~~	~~Spanish~~	-	-
40393	CIENCIA DE DATOS EN TURISMO	Data science in tourism	Aut.	Spanish	Yes	Yes
40394	CIENCIA DE DATOS PARA LA DIRECCIÓN ESTRATÉGICA	Data science for strategic management	Aut.	Spanish	No	Partially
40395	MARKETING INTERACTIVO Y PUBLICIDAD DIGITAL	Interactive marketing and digital advertising	Aut.	Spanish	Yes	Yes
40398	PROCESAMIENTO DEL LENGUAJE NATURAL	Natural language processing	Aut.	Spanish	Yes	Yes
40399	SIMULACIÓN Y APLICACIONES EN CIENCIAS SOCIALES Y EXPERIMENTALES	Simulation and applications in social and experimental sciences	Aut.	Spanish	Yes	Yes
40390	TECNOLOGÍAS DE SERVICIOS PARA CIENCIA DE DATOS	Service technologies for data science	Aut.	Spanish	Yes	Yes
~~40391~~	~~TECNOLOGÍAS PARA LA CAPTACIÓN DE DATOS~~	~~Data capture technologies~~	~~Aut.~~	~~Spanish~~	-	-
40462	SEGURIDAD DE LA INFORMACIÓN	Information security	Sum.	Spanish	Yes	Partially
~~40464~~	~~TRABAJO FIN DE GRADO*~~	~~Final degree thesis [24 ECTS]~~	~~Sum.~~	~~Spanish~~	-	-

* Special conditions apply

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