UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH
UPC

UNIVERSITÀ
DEGLI STUDI
DI PADOVA

## Curriculum Content. Description of the Programme of Study

### UPC students studying at UNIPD

| | First Semester | ECTS |
|---|---|---|
| | Process-Oriented Data Processing | 6 |
| | Algorithms, Data Structures and Databases | 6 |
| | Data Warehousing | 6 |
| 1st Year at FIB | Statistical Inference and Modeling | 6 |
| | Multivariate Analysis | 6 |
| | Second Semester | |
| | Big Data Management | 6 |
| | Semantic Data Management | 6 |
| | Mining Unstructured Data | 6 |
| | Machine Learning | 6 |
| | Elective | 6 |
| | | |
| | First Semester | ECTS |
| | Stochastic Methods | 6 |
| | Law and Data | 6 |
| 2nd Year at UNIPD | Vision and Cognitive Systems | 6 |
| | Elective | 6 |
| | Elective | 6 |
| | Second Semester | |
| | Master Thesis | 15 |
| | Internship | 15 |
| | | |

| Pool of Elective Courses at FIB during Second Semester of First Year | | |
|---|---|---|
| Algorithms for Data Mining | Cloud Computing and Data Analytics | Techniques and Methodology of Innovation and Research |
| Viability of Business Projects | Innovation Project | |

*or any other elective course offered when the mobility takes place*

| Pool of Elective Courses at UNIPD during First Semester of Second Year | | |
|---|---|---|
| Network Science | Cognition and Computation | Business Economics and Financial Data |
| Human Data Analytics | Bioinformatics | |

*or any other elective course offered when the mobility takes place*

## UNIPD students studying at UPC

| | First Semester | ECTS |
|---|---|---|
| | **First Semester** | **ECTS** |
| 1st Year at UNIPD | Fundamentals of Information Systems | 12 |
| | Statistical Learning MOD. A | 6 |
| | Machine Learning | 6 |
| | Stochastic Methods | 6 |
| | Law and Data | 6 |
| | | |
| | **Second Semester** | |
| | Big Data Computing | 6 |
| | Statistical Learning MOD. B | 6 |
| | Natural Language Processing | 6 |
| | Optimization for Data Science | 6 |
| | | |
| 2nd Year at FIB | **First Semester** | **ECTS** |
| | Process-Oriented Data Science | 6 |
| | *Elective* | 6 |
| | *Elective* | 6 |
| | *Elective* | 6 |
| | *\* Students will be informed to start working on the master thesis during the first semester to compensate the added workload in the second one* | |
| | **Second Semester** | |
| | Master Thesis | 30 |
| | Semantic Data Management | 6 |
| | | |

| Pool of Elective Courses at FIB during First semester of Second Year | | |
|---|---|---|
| Advanced Statistical Modeling | Techniques and Methodology of Innovation and Research | |
| Advanced Multivariate Analysis | Complex Social Networks | Information Retrieval and Recommender Systems |
| Advanced Machine Learning | Bioinformatics and Statistical Genetics | |

*or any other elective course offered when the mobility takes place*

*All mandatory courses at UPC will be covered by UniPd students according to the following table:*

| UPC Mandatory Courses | ECTS | Corresponding Courses for UniPD students | ECTS |
|---|---|---|---|
| Algorithms, Data Structures and Databases | 6 | Fundamentals of Information Systems | 12 |
| Data Warehousing | 6 | | |
| Statistical Inference and Modeling | 6 | Statistical Learning MOD. A | 6 |
| Machine Learning | 6 | Machine Learning | 6 |
| Big Data Management | 6 | Big Data Computing | 6 |
| Multivariate Analysis | 6 | Statistical Learning MOD. B | 6 |
| Mining Unstructured Data | 6 | Natural Language Processing | 6 |
| Process-Oriented Data Science | 6 | Process-Oriented Data Science (*) | 6 |
| Semantic Data Management | 6 | Semantic Data Management (*) | 6 |

(*) Educational activity taken by UniPd students at UPC