With the support of the Erasmus+ programme of the European Union

European Master’s Programme in BIG DATA MANAGEMENT and ANALYTICS

Today, public and private organisations in all sectors face an avalanche of digital data on a daily basis. While at first glance this appears to be favourable for our knowledge-based society, in many ways it is a burden. Data is neither information nor knowledge. Instead, data is of great value once it has been refined and analysed, in order to address well-formulated questions, concerning problems of interest. It is only then through data-driven innovation that the economic and social benefit can be fully realised.

The Erasmus Mundus Joint Master Degree Programme in Big Data Management and Analytics (BDMA) is a unique programme that fully covers all of the data management and analytics aspects of Big Data (BD), built on top of Business Intelligence (BI) foundations, and complemented with horizontal skills. It has been jointly designed and adheres to international studies, being structured to cover all the skills BI and BD specialists require.

SCHOLARSHIPS
The Erasmus+ programme provides EU-funded scholarships to students who have been selected by the consortium.

Students from Programme Countries (ie. EU, Iceland, Liechtenstein, Norway, Turkey, and Former Yugoslav Republic of Macedonia): €17,500 per year

Students from Partner Countries: €24,000 per year

Note: Erasmus+ enable students to gain access to loans on favourable conditions, that are up to € 18,000 for two years.

TUITION FEES
- Students from Programme Countries: €4,500 per year
- Students from Partner Countries: €9,000 per year

APPLICATION DEADLINES
- Students applying for an Erasmus+ scholarship:
  - December, 11th 2017
- Students not applying for an Erasmus+ scholarship:
  - April 30th, 2018 (Partner countries students)
  - June 30th, 2018 (Programme countries students)

ADMISSION CRITERIA
To apply to BDMA, candidates must meet the following eligibility criteria:
- They have been awarded a Bachelor’s degree (i.e., the equivalent of 180 ECTS) with a major in computer science, from an accredited university.
- They must be able to demonstrate proficiency in English by means of an internationally recognised test equivalent to level B2 in the CEFR.

DEGREE AWARDED
Upon completion of the programme, graduates will be awarded with a multiple degree, the nationally recognised master’s degrees from ULB, UPC and the university of the specialisation.

WHY CHOOSE BDMA?
- A two-year course in BI & BD fully delivered in English, given by world-renowned European institutions who jointly designed the courses and programme, including three choices of specialisation.
- The first curriculum in Europe covering the broad scope of scientific and technological fields supporting today and tomorrow’s BI and BD needs.
- Strong connections with research and industry, through cooperation with industrial partners, research institutes, regional public authorities, universities around the world, and a European university network.

CONTACT
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Need more information about BDMA?
bdma.univ-tours.fr/
facebook.com/bdma
twitter.com/bdmaMASTER

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The programme favours the integration of students into a network of specialists and researchers in BI. The curriculum is jointly delivered by:

- Université Libre de Bruxelles (ULB), Belgium
- Universitat Politècnica de Catalunya (UPC), Spain
- Technische Universität Berlin (TUB), Germany
- Technische Universität Eindhoven (TU/e), Netherlands
- Université François Rabelais Tours (UFRT), France

This consortium will prepare the graduates not only to answer today’s professional challenges by a strong connection with the needs coming from the industry, but also to pursue their studies into doctorate programmes, through strong connections with the researchers’ and innovators’ views.

COURSE STRUCTURE

BDMA is a two-year (4 semesters, 120 ECTS) Master’s programme offered by 5 higher education institutions.

The first year is devoted to fundamentals: the first semester at ULB, the second one at UPC. Then, all students participate to the European Business Intelligence & Big Data Summer School.

In the third semester, the programme offers three specialisations at TUB, TU/e and UFRT and students move to the partner of the chosen specialisation.

The fourth semester is dedicated to the master’s thesis and can be realised either as a placement in industry, or as an internship in a research laboratory in any full or associated partner.

COURSE CONTENT

- **Business Intelligence Fundamentals (ULB, Semester 1)**
  - Data Warehouses 5 ECTS
  - Business Process Management 5 ECTS
  - Data Mining 5 ECTS
  - Advanced Databases 5 ECTS
  - Database Systems Architecture 5 ECTS
  - Humanities: Foreign Language 2.5 ECTS
  - Humanities: Effective Communication 2.5 ECTS

- **Big Data Fundamentals (UPC, Semester 2)**
  - Big Data Management 6 ECTS
  - Semantic Data Management 6 ECTS
  - Cloud Computing 6 ECTS
  - Viability of Business Projects 6 ECTS
  - Big Data Seminar 2 ECTS
  - Humanities: Foreign Language 2 ECTS
  - Humanities: Social and Ethical 2 ECTS

- **Large-Scale Analytics (TUB, Semester 3)**
  - Scalable Data Science 6 ECTS
  - Management of Heterogeneous Information 6 ECTS
  - Management of Data Streams 6 ECTS
  - Big Data Analytics Project 9 ECTS
  - Big Data Analytics Seminar 3 ECTS
  - Humanities: Interdisciplinary Communication 6 ECTS

- **Business Process Analytics (TU/e, Semester 3)**
  - Business Information Systems 5 ECTS
  - Introduction to Process Mining 5 ECTS
  - Visualisation 5 ECTS
  - Statistics for Big Data 5 ECTS
  - Business Process Analytics Seminar 5 ECTS
  - Humanities: Ethics and Technology 5 ECTS

- **Content and Usage Analytics (UFRT, Semester 3)**
  - Data and Knowledge Quality 6 ECTS
  - User Centric Approaches 5 ECTS
  - Natural Language Processing 5 ECTS
  - Advanced Data Mining 6 ECTS
  - Content and Usage Analytics Seminar 5 ECTS
  - Humanities: Ethics and Digital Technologies 3 ECTS

- **Master’s Thesis (Semester 4)**
  - 30 ECTS