

Postgraduate Studies:

Big Data & Analytics in Business and Management



This programme is a unique offering as its general aim is to bridge the gap between technical concepts and business applications of big data and analytics techniques.

On the one hand, the programme will provide participants with a thorough understanding of the key technical aspects of big data and analytics technologies. On the other hand, the programme focuses on business and management applications, substantiating how big data and analytics techniques can create business value and providing insights on how to manage big data and analytics projects and teams. This inherent interdisciplinary focus is the unique selling point of our programme.

The programme is founded on the lecturers' experience of advising and collaborating with industry and governmental organizations in Belgium and abroad. After successful completion of the programme, participants will be up-to-date with the latest developments related to big data and analytics. Furthermore, they will understand how to apply these techniques in practice and create value for their organization. The programme is relevant for participants from different sectors, including: business, government, healthcare, media, education, energy and transport.

Target Audience and Admission Criteria

Participants should have obtained an academic or professional bachelor degree. The programme aims at participants with minimum one year of practical experience in the area of business analysis, data analytics, data analysis, statistics, data management, project management, etc. A minimum of one year of work experience is expected. Admissions are evaluated by the academic coordinator based on CV and motivation letter. The goal is to build a homogeneous participant group to foster discussions and share experiences.

Example target profiles are: chief data officer, chief analytics officer, compliance and risk officers and managers, data architects, data project managers, junior industry data scientists, data-related programme managers, business analysts, product managers, IT project managers, etc.



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Programme structure

- **1. Fundamentals of Data Analytics**
Predictive analytics, (un)supervised learning techniques, descriptive analytics, the analytics process, data collection and exploration, model evaluation.
- **2. Big Data Technologies**
Hadoop, MapReduce, Spark and H2O, NoSQL and Graph data bases.
- **3. Analytics Business Applications**
Recommender systems, insurance analytics, fraud detection, HR analytics, audit compliance checking, social network analytics, decision analytics, formal concept analysis.
- **4. Process Analytics**
Process discovery, event log data, conformance checking, predictive process mining.
- **5. Managing Big Data & Analytics Projects and Teams**
The data science process, model deployment, valorization of analytics, analytics and IT integration, data quality, data security and compliance, ethics and privacy.

Lecturers:

Prof. Dr. Jochen De Weerd, Prof. Dr. Seppe vanden Broucke, Prof. Dr. Bart Baesens, Prof. Dr. Wilfried Lemahieu, Prof. Dr. Monique Snoeck, Prof. Dr. Johannes De Smedt, Prof. Dr. Wouter Verbeke, Guest speakers

Postgraduate Certificate

For obtaining the postgraduate certificate, the participants will write a paper and give a presentation about a case study performed in his/her organization. The case study should deal with the (potential) application of big data and analytics techniques in the context of a case within the organization. Participants will be actively guided by one of the lecturers.

After successful completion of the evaluation, the participant will receive the postgraduate certificate "Postgraduate Studies in Big Data & Analytics in Business and Management", awarded by the KU Leuven and signed by the Rector.

Practical Information

- **Registration fee:**
The registration fee is 5500 euro. Employees of organizations currently donating a research chair at the Faculty of Economics and Business get a 20% discount.
- **Course schedule:**
Sessions are scheduled on Fridays from 1.30pm until 9.00pm on the following dates in the fall of 2024:
 - October 4, 11, 18, and 25
 - November 8, 15, 22, and 29
 - December 6, and 13
- **Course location:**
Faculty of Economics and Business,
Naamsestraat 69, 3000 Leuven
- **Registration:**
In order to book your seat in the programme, you can register through:
feb.kuleuven.be/permanente-vorming/pgbigdataregistration

Website:

Visit feb.kuleuven.be/permanente-vorming/bigdataanalytics for more information.

- **Location:**
Faculty of Economics and Business,
Naamsestraat 69, 3000 Leuven
- **Academic coordinators:**
Prof. Dr. Jochen De Weerd
Prof. Dr. Seppe vanden Broucke
- **Programme coordinator:**
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