IT applied to banking and actuarial decision-making - Post-master degree

Accredited by the Conference of Grandes Ecoles

On-line Applications

Director: Roger Waldeck

Programme objectives

The master of IT applied to banking and actuarial decision-making (IADBA) aims to train specialists in business intelligence (BI) with a professional orientation toward the banking, finance and insurance industries. Two career opportunities are targeted:

- **BI**: implementation of information systems to aid decision-making
- **Data analyst**: quantitative and decision-making methods with an emphasis on mathematical modelling and quantitative management.
BI, decision-making mathematics and data analysis are at the heart of this programme. Financial engineering for insurance and banking is a key focus. Banking and insurance are indeed dynamic sectors where competition is intense, while performance standards are increasingly demanding, which requires ever-expanding techniques for statistical exploitation of databases. **Even so, the IT for decision-making programme at IMT Atlantique covers all aspects of decision-making and is thus not limited to these sectors alone.**

**Advantages of IMT Atlantique**

It is in this context that in 2002 IMT Atlantique designed the IADBA master's. The objectives and programme of this master's have been approved by a large number of professionals in the banking and insurance sector and the master's is regularly placed in first or second position in the Eduniversal (SMBG) ranking in IT for decision-making. SAS, world leader in business intelligence, and Federal Finance of the Arkea Group, bring their support to the IADBA master's. This master's is co-accredited with the Grenoble School of Management and is led in cooperation with EURIA (Euro Institute of Actuarial Sciences of the University of West Brittany). The teaching team brings together academic experts (researchers in the area of business intelligence, data mining, finance...) and confirmed professionals. **SAS certification is a component of the programme.** The policy of this MSc is to recruit a small number of very high-level candidates. The class is made up of between eight and 15 students.

**Applicant profile**

Applicants to this master's should hold a master's degree in IT, mathematics and/or statistics/econometrics or hold an honours degree and three years of relevant experience. The number of places for this master's is limited. This course basically allows students who are not IT specialists to acquire good foundations in IT for decision-making and allows IT specialists to specialise in business intelligence, with strong skills in data analysis, management and finance. It allows students from each of these profiles to acquire a wide range of skills.

*Required qualifications:*
- An engineering or Business Grande Ecole degree
- A graduate degree: research or professional master of advanced studies, DEA or DESS, second year master’s.
- A first-year master’s, combined with at least three years of professional experience with management responsibility (maximum 25% of the class)
- An equivalent qualification from an institution abroad

Programme

This master's offers students three possible tracks: the data-mining track (FD)", the "financial engineering track (IF)", the business intelligence track (SID)". The credits taken in each track diverge at level two and four.

Each track offers a strong foundation in modelisation and digital methods, enhanced by computer mastery. At the same time, they offer a certain distinctiveness which permits students to emphasise aspects related to finance or to business intelligence.

The tracks:

- "Data-mining" (FD) track

This track prepares students for quantitative engineering professions with an emphasis on the financial sector and software and computing services. This track offers a good balance between developing foundations in finance, through the choice of the "finance" elective at level two, and data processing (the "data mining" credits at level four). The focus of this track is clearly to train business intelligence specialists in an approach to data processing which is able to interface financiers' models and the processing of their data.

- "Financial engineering (IF)" track

This track prepares students as quantitative engineers and IT specialists in the area of financial services: banking, insurance, software and computing services. Acquiring complementary methods in empirical finance is emphasised in choosing the "empirical finance" credits instead of the "data-mining" credits at level four. Note that this track requires a solid foundation in probability/stochastic processes and admission depends on the applicant's profile.

- "Business intelligence (SID)" track

This track covers all aspects of decision-making, while also providing basic knowledge in finance, insurance and financial management. This track focuses on the implementation of business intelligence systems. Business intelligence (BI) involves the implementation of a chain of adequate processing within the information system, including the management of data warehouses, and methods of analysis and extraction of information from the data (data mining). This track brings together the computing aspects of information systems, decision-making aspects (architecture, methodology, data warehouses) and underlying mathematical models (through multi criteria decision making, data analysis). It also highlights the need for coherence between the information system, the organisation and the users. Students must select the level two "business intelligence" credit. At level four, the "data mining" credit is compulsory.

Programme information:

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Application fees: €60 for one option and €90 for two options

Tuition fees:
Tuition fees may be covered by in-service training funding organisations such as, Pôle Emploi, the French National Employment Agency (FNE) or a student loan granted by banks according to their specific conditions.

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