



BAN – Business Analytics

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BAN is the use of quantitative tools for the purpose of value creation in business



Essential skills in Business Analytics

1. Business modeling
2. Data analysis
3. Programming skills

Your comparative advantage: To be good (business-) economists who can communicate well with engineers and programmers.



Business modeling

Using optimization models and simulations for decision support, analysis and improving business processes. Often called prescriptive analytics.





Data analysis

Statistical learning and predictive analytics for learning and extrapolating from data.



For data handling and problem solving in business.





Examples of careers

- Management analyst
 - Use (big) data and analytics to improve efficiency in an organization.
- Market research analyst
 - Use data and analytics to study market conditions and which products that are in demand.
- Chief data officer
 - A complex job involving skills in business strategy as well as in data collection and analysis.
- Jobs in the public sector, the finance-, accounting-, transportation industry,...



Examples of uses in different fields

- **Business Analysis and Performance Management**
 - Logistics and shipping
 - Supply chain management
 - Electricity markets
- **Economics**
 - Detection of tax evasion
- **Strategy and management**
 - Performance measurement
- **Marketing**
 - Impact of a marketing campaign
 - Targeted marketing
 - Recommendation systems
- **Finance**
 - Credit scoring
- **Accounting**
 - Fraud detection



The major – core courses

Programming

BAN400
R programming for data science
(Fall)

BAN401
Applied programming and data
analysis for business
(Fall)

Business modelling

BAN402
Decision modelling in business
(Fall)

BAN403
Simulation of business
processes
(Spring)

Predictive analytics

BAN404
Predictive analytics with R
(Spring)

At least one

Both



Our core courses address

1. How to formulate and solve business problems?
2. How to make actionable information based on raw data?
3. How to write prototype code to test ideas and to communicate with, e.g., engineers?
4. How to work and communicate in teams?



Electives - methodological

BAN400	R Programming for data science
BAN401	Applied programming and data analysis for business
BAN420	Introduction to R *
BAN426	Applied Data Science * (Spring)
BAN430	Forecasting (Spring)
BAN423	Benchmarking with DEA, SFA and R * (Fall)
BAN432	Applied Textual Data Analysis for Business and Finance (Fall)
ECN430	Empirical Methods and Applications in Macroec. and Finance (Spring)
FIE453	Big Data with Applications to Finance (Fall)
STR459	Artificial Intelligence and Robotics (in Norwegian, Spring)

* 2.5 ECTS



Electives – business applications

BAN402	Decision modelling in business
BAN403	Simulation of business processes
BAN424	Applications of Business Analytics* (Fall)
BAN425	Applied Risk Management* (Spring)
BAN427	Insurance Analytics (Fall)
BAN433	Applied Cloud Computing for Enterprises* (Spring)
BAN435	Block Chain Technology and Cryptocurrencies* (Fall)
BUS401	Strategic Profitability Analysis and Pricing (in Norwegian)
BUS403	Supply Chain Management (Fall)
BUS427	Advanced Management Accounting (Spring)
BUS429	Pricing Analytics and Revenue Management (Fall)
BUS432	Operations management (in Norwegian, Spring)
BUS460	Operational Risk Management (Fall)
BUS465	Corporate Crime: Detection and Prevention (Spring)
ECN431	Applied Data Analysis of Firm Strategy and Competition (Spring)
STR453	Digitalization (in Norwegian, Spring)



Compulsory demands for BAN

BAN400 R Programming for Data Science	or	BAN401 Applied Programming and Data Analysis for Business
BAN402 Decision Modelling in Business		
BAN403 Simulation of Business Processes		
BAN404 Predictive Analytics with R		

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Ethics
(2,5 stp)

The compulsory courses covers the requirement for courses in empirical methods.