

Business Analytics, Computer Science and Engineering (MSc, Technology), 2021-2022 - IMP2021BACSE

Code

IMP2021BACSE

Validity

1.8.2021 -

Educational level

Master's Programmes (2 years)

ECTS credits

120

Duration (years)

2

Language

English

Specifications

Degree

Master of Science (Technology)

Degree title

-

Programme

-

Major subject

-

Classification code

-

Type

-

Group

-

Tags

-

Person in charge

Veikko Seppänen

Organization unit

Faculty of Information Technology and Electrical Engineering

Description

Description

The programme will produce experts in analytics, who understand the needs of business, industrial and public organizations in regard to gathering, analyzing and using digital data for decision making, operations and development work. The programme addresses how to evaluate, choose and deploy the relevant analytics theories and methods and gain experience in using tools and environments for solving real-life analytics problems. The students will learn how to interpret analysis results and present them for the respective users, as well as spar and give recommendations for decision making. Simulation and optimization means are included, as well as the dynamics of actions, outcomes and contexts involved in analysis targets. The programme addresses how to search for, gather and create research data and produce research reports based on scientific conduct in multi-disciplinary settings and different empirical contexts. In addition, responsible and sustainable business, as well as the ethics of data gathering, management and analysis principles and practices are included. The programme revolves around teamwork and project-based collaboration, so that problems can be solved for and with external stakeholders based also on good communication skills. The students will learn to plan and manage development projects and launch new activities involving business analytics. They will gain scientific knowledge, practical experiences and networks that will make it possible for them to continue their studies and carry out research towards a doctoral degree.

Further information

Curriculum development and working life cooperation

Objectives

After completing the Master's Programme in Business Analytics:

Graduates are able to acquire data and organize, analyze and manipulate it for development and deployment. They know simulation and optimization means and can make use of them. They can make use of appropriate methods and tools for external (e.g. suppliers, users, customers, competitors) and internal (e.g. R&D, production, management, sales) analysis needs. Graduates know data protection, privacy and ethics principles and can work in multi-party teams and projects. They know how to develop and deploy business analytics in different environments and contexts.

Structure

Code	Name	Credits
IMP2021BACSE	Business Analytics, Computer Science and Engineering (MSc, Technology), 2021-2022	130
IMP2021BACSE-1012	Business Analytics, Computer Science and Engineering, Compulsory orientation studies	15
IMP2021BACSE-1013	Foreign language studies	5

900013Y	Beginners' Finnish Course 1	3
900017Y	Survival Finnish	2
IMP2021BACSE-1015		10
721021A	Intermediate Course to Business Analytics	5
721022S	Data and Decision Making	5
IMP2021BACSE-1004	Business Analytics, Computer Science and Engineering, Advanced studies	55
IMP2021BACSE-1005 Compulsory Studies		55
812352A	Digitalisation and Innovation	5
811397A	Basics of Project Work	5
813320A	Business Intelligence: Applications and Projects	5
817619S	Societal and Individual Impacts of Information Systems	5
521156S	Towards Data Mining	5
721026S	Statistical Methods for Business Analytics	5
721023S	Market and Competitor Analysis	5
721024S	Customer Behaviour Analysis	5
721025S	Enterprise Process Planning	5
721027S	Capstone Project I	5
721028S	Capstone Project II	5
IMP2021BACSE-1006	Business Analytics, Computer Science and Engineering, Studies of specialisation	30
IMP2021BACSE-1018		15
521289S	Machine Learning	5
521283S	Big Data Processing and Applications	5
521158S	Natural Language Processing and Text Mining	5
IMP2021BACSE-1019 Optional studies		5
521157A	Introduction to Social Network Analysis	5
521495A	Artificial Intelligence	5
521153S	Deep Learning	5
521161S	Multi-Modal Data Fusion	5
KA00DA50	Data Visualization	5
812651S	ICT and Behaviour Change	5
811607S	Persuasive Systems Design	5
811604S	Software for Intelligent Systems and Artificial Intelligence (AI)	5
817615S	Creating Domain Value with Data	5
IMP2021BACSE-1020 Optional studies		10
521157A	Introduction to Social Network Analysis	5
521495A	Artificial Intelligence	5
521153S	Deep Learning	5
521161S	Multi-Modal Data Fusion	5

KA00DA50	Data Visualization	5
812651S	ICT and Behaviour Change	5
811607S	Persuasive Systems Design	5
811604S	Software for Intelligent Systems and Artificial Intelligence (AI)	5
817615S	Creating Domain Value with Data	5
IMP2021BACSE-1009		30
551315S	<i>Maturity Test</i>	0
521029S	<i>Master's Thesis, Business Analytics (Computer Science and Engineering)</i>	30