

Course Descriptions None 2019-2020

Course Title Business Intelligence for Smart Services
Course Code EBC4221
ECTS Credits 5,0
Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	28-10-2019	20-12-2019					

Level Advanced
Coordinator Mark Vluggen For more information: m.vluggen@maastrichtuniversity.nl
Language of instruction English

Goals After following this course, you will have gained the following competences:
•Understand the main concepts of Business Intelligence and its role in organizational decision-making and smart service innovation. You will acquire knowledge of data warehouse models and tools for visually reporting and analysing data.
•Knowledge application: You will learn to use and your knowledge on realistic cases and datasets.
•Critical Thinking: You will be provided with literature. The material also includes academic papers in which the research methodology to measure the impact of decision-making in the context of smart services is discussed.
•Research Skills: You will apply business intelligence techniques, which directly contribute to your research skills. Moreover, you will gain experience with reporting data and data mining by using two intuitive Business Intelligence tools.
•Communication and professional attitude: to realize the above learning objectives, interaction, feedback, and teamwork will be key. As a result, you will also sharpen your communication skills and improve your professional attitude.

Description In an age of smart services, connectivity and data analytics have become a technology driver, businesses are becoming more efficient in their operations, decision makers are using computerized tools to support their work and even consumers are using analytics tools to directly or indirectly make decisions on their routine activities such as shopping, healthcare, and entertainment. In such context, Business Intelligence is a set of theories and methodologies that handle large amounts of data and information to assist decision-makers with automated processes, measurements, and analysis of business performance. A Business Intelligence solution will integrate the process of measuring, analyzing, and decision-making. Business Intelligence for Smart Services provides technical solutions that are characterized by a connection to a suitable service infrastructure, which supports agile decision behavior in terms of proactivity, learning ability, and effectiveness. Smart Service solutions meet all the prevailing criteria with regard to ethical standards, socioeconomic trustworthiness, and technical security for all the stakeholders. This course combines theoretical frameworks and practical approaches for the structural utilization of business intelligence for smart services within organizations. Moreover, the course teaches how these tools can be centrally anchored in the organization's strategy and operations. The course also explores the underlying technologies facilitating the integration of business intelligence and business analytics through a focus on relevant digital platforms and data systems.

Literature •The lecture slides, available in the course's webpage;
•The 4th edition of Ramesh Sandra, Dursun Delen, Efraim Turban Business Intelligence, Analytics and Data Science.
•The academic papers and readings are listed in the course manual and are made available electronically. Articles have generally been selected from leading professional and academic journals in the field of Business Intelligence.
Recommended:
• Four Strategies for the age of Smart Services: <https://hbr.org/2005/10/four-strategies-for-the-age-of-smart-services>
• Datawarehouse Overview available at <https://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/sigrecord.pdf>
• Healthcatalyst <https://www.healthcatalyst.com/news/three-health-catalyst-clients-recognized-for-data-driven-quality-success-hfma/>
• 'Why do employees resist knowledge management systems? An empirical study from the status quo bias and inertia perspectives' by Jia Li, Minghui Liu, Xuan Liu https://www.researchgate.net/profile/Xuan_Liu38/publication/309609207_CHB-online_version/links/581982bf08ae1f34d24acff6.pdf
• A study on Big Data and Datawarehouse <http://www.ijctjournal.org/Volume9/number-4/IJCTT-V9P137.pdf>
• Read Ambient Intelligence and Smart Environments: The state of the Art. This article can be found here <https://pdfs.semanticscholar.org/f585/8c4ddd20fc3854508d67bcd8d12d44007e1.pdf>
• Read Autonomous Systems. Social, Legal and Ethical Issues. This article can be found here: <http://www.raeng.org.uk/publications/reports/autonomous-systems-report>
• Read Homes and their Users: A systematic analysis and key challenges <https://core.ac.uk/download/pdf/29109288.pdf>

Prerequisites Only for students who started the programme prior to September 2019.

TRANSITIONAL REGULATION:
Students started the programme prior to September 2019 will be able to finish their programme until September 2020 (excl.).
For the educational units which no longer will be offered as of September 2019 and which students have not completed successfully, a resit option for (all components of) the educational unit will be given until September 2020 (excl.).

Keywords
Teaching methods PBL / Lecture
Assessment methods Participation / Written Exam / Assignment
Evaluation in previous academic year For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>
This course belongs to the following programme / specialisation