

Elective course: Business Intelligence and Big Data Analysis (BIBA)

About the course

subject	Datalogi / Informatik
activitytype	master course
Teaching language	English
Registration	<p>Tilmelding sker via stads selvbetjening indenfor annonceret tilmeldingsperiode, som du kan se på Studieadministrationens hjemmeside</p> <p>Når du tilmelder dig kurset, skal du være opmærksom på, om der er sammenfald i tidspunktet for kursusafholdelse og eksamen med andre kurser, du har valgt. Uddannelsesplanlægningen tager udgangspunkt i, at det er muligt at gennemføre et anbefalet studieforløb uden overlap. Men omkring valgfrie elementer og studieplaner som går ud over de anbefalede studieforløb, kan der forekomme overlap, alt efter hvilke kurser du vælger.</p> <p>Registration is happening through stads selvbetjening within the announced registration period, as you can see on the Studyadministration homepage.</p> <p>When registering for courses, please be aware of the potential conflicts between courses or exam dates on courses. The planning of course activities at Roskilde University is based on the recommended study programs which do not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programs, an overlap of lectures or exam dates may occur depending on which courses you choose.</p>
Detailed description of content	<p>Data is being collected, analyzed, and used in intelligent applications as never before. This applies across all areas of business, science and life. We live in an age not only of a digital revolution, but also of a data revolution, where businesses, in order to succeed, need to be ever more data-driven. But what does it mean to be data-driven and what are Big Data, Machine Learning, Artificial Intelligence, and Data Science in a business context? In this course, we will answer these questions by giving a hands-on introduction to Data Science (using the tool R) looking at how data can be utilized especially within businesses and organizations. We will discuss classical Business Intelligence and how data can be utilized in solving business problems. We will look at the entire data analysis cycle: from asking questions, collecting, preprocessing, and analyzing data, to building (machine learning) models and communicating the results. Furthermore, we will look at the particular challenges of storage and computation in the context of Big Data.</p>
Expected work effort (ECTS-declaration)	The course will have a total workload of 135 hours with 40 hours of lectures and exercises, 70 hours of preparation over an 11 week course period and 25 hours for the exam and preparation before the course
Course material and Reading list	Articles and extracts from books and web.
Evaluation- and feedback forms	There will be feedback on exercises which are set during the course. An evaluation will take place at the end of the course
Administration of exams	IMT Studyadministration (imt-studyadministration@ruc.dk)
Responsible for the activity	Jens Ulrik Hansen (jensuh@ruc.dk)
ECTS	5
Learning outcomes and assessment criteria	<ul style="list-style-type: none">• Knowledge• Knowledge and understanding of a specific Informatics subject area.• A comprehensive overview and understanding of the general principles behind the subject area's theory, methods and technological solutions.• Skills:• Selecting and applying appropriate methods and techniques from the subject area.• Kompetencer:• Being able to work with IT issues, both independently and in teams.

	<ul style="list-style-type: none"> Being able to critically and systematically learn new approaches to the subject area and thereby independently take responsibility for one's own professional development.
Overall content	<p>With the topic of their own choosing, the student has the opportunity to specialise in a specific subject area where the student acquires knowledge, skills and competences in order to translate theories, methods and solutions ideas into their own practice in relation to the design and implementation of IT applications.</p> <p>Subjects can include: IT strategy, IT project management, sourcing of IT projects, IT and enterprise architecture, design and innovation in IT organisations</p>
Teaching and working methods	<p>Normal class instruction, i.e. a mix of lecturer presentations, student presentations and practical work on specific tasks.</p> <p>Lectures with exercises.</p>
Type of activity	Elective course
Form of examination (p1)	<p>Individual oral exam based on an assignment.</p> <p>The exam is conducted as a dialogue. There may be posed questions in any part of the curriculum.</p> <p>The character limit of the written product is maximum 48,000 characters, including spaces. The character limits include the cover, table of contents, bibliography, figures and other illustrations, but exclude any appendices.</p> <p>Time allowed for exam including time used for assessment: 20 minutes. The assessment is an overall assessment of the written product(s) and the subsequent oral examination.</p> <p>Permitted support and preparation materials for the oral exam: All.</p> <p>Assessment: 7-point grading scale. Moderation: Internal co-assessor.</p>
Form of Re-examination (p1)	Samme som ordinær eksamen
Exam code(s)	Exam code(s) : U40549

Course days:

Hold: 1

Business Intelligence and Big Data (BIBA) (INF)

time 13-09-2021 12:15 til
13-09-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 20-09-2021 12:15 til
20-09-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 27-09-2021 12:15 til
27-09-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 04-10-2021 12:15 til
04-10-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 11-10-2021 12:15 til
11-10-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 18-10-2021 12:15 til
18-10-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 25-10-2021 12:15 til
25-10-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 01-11-2021 12:15 til
01-11-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 08-11-2021 12:15 til
08-11-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) (INF)

time 15-11-2021 12:15 til
15-11-2021 16:00

location 10.1-025 - teorirum (32)

Teacher Jens Ulrik Hansen (jensuh@ruc.dk)

Business Intelligence and Big Data (BIBA) - Hand-in (INF)

time 22-11-2021 10:00 til
22-11-2021 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

Business Intelligence and Big Data (BIBA) - Oral examination (INF)

time 10-01-2022 08:15 til
11-01-2022 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 09.2-053 - mødelokale (5)

Business Intelligence and Big Data (BIBA) - Reexam - Hand-in (INF)

time 15-02-2022 10:00 til
15-02-2022 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

Business Intelligence and Big Data (BIBA) - Oral reexamination (INF)

time 22-02-2022 08:15 til
22-02-2022 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 09.2-053 - mødelokale (5)