Elective Course: Business Intelligence and Big Data Analysis

About the course

subject	Datalogi / Informatik / Mathematical Computer Modelling
activitytype	master course
Teaching language	English
Registration	Tilmelding sker via STADS-Selvbetjening indenfor annonceret tilmeldingsperiode, som du kan se på Studieadministrationens hjemmeside

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.

Registration through STADS-Selvbetjening within the announced registration period, as you can see on the Studyadministration homepage.

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. |
Detailed description of content	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.
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 Studieadministration (imt-studieadministration@ruc.dk)
Responsible for the activity	Henrik Bulskov (bulskov@ruc.dk)
Jesper Schmidt Hansen (jschmidt@ruc.dk)
Jens Ulrik Hansen (jensuh@ruc.dk)
Type of examination	Individual oral examination based on a set assignment.

The examination is conducted as a dialogue. During the examination, questions can be asked regarding the entire syllabus. The written product must be between 4,800 - 48,000 characters in length, including spaces.

The size specifications include the cover, table of contents, bibliography, figures and other illustrations, but exclude any appendices. Time allowed for examination including time used for |

assessment 20 minutes. The assessment is an overall evaluation of the written product and the oral examination. Permitted support and preparation materials during the examination: All.

Assessment: 7-point grading scale. Moderation: Internal co-assessor.

Reexam

Same as ordinary

ECTS	5
Learning outcomes and assessment criteria	- Knowledge and understanding of a specific subject area in computer science - Knowledge and understanding of the area's techniques for designing and constructing software systems that meet specific requirements - Knowledge and understanding of the general principles behind the subject area's theory, methods and technological solutions. - Skills in electing and applying appropriate methods and techniques from the subject area in order to analyse, design and construct reliable and user-friendly software systems - Competences in being able to work on computer science-related issues, both independently and in teams - Competences in being able to become proficient in new approaches to the subject area in a critical and systematic way and thereby independently take responsibility for one's own professional development.
Overall content	With an elective course, 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 software development. Examples of elective courses: Robotics, AI, internet technologies, programming language, parallel calculation, mobile computers, etc.The specific contents are listed on study.ruc.dk.
Teaching and working methods	Normal class instruction, i.e. a mix of lecturer presentations, student presentations and practical work on specific tasks. Lecture with exercises. Is stated in the description on study.ruc.dk.
Type of course	Elective course
Exam code(s)	Exam code(s) : U40549

Course days:

Hold: 1

Informatics: Business Intelligence and Big Data (BIBA)

time	10-02-2020 12:15 til 10-02-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	17-02-2020 12:15 til 17-02-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	24-02-2020 12:15 til 24-02-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	11.1-047 - studiesal (40)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	02-03-2020 12:15 til 02-03-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	11.1-047 - studiesal (40)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	09-03-2020 12:15 til 09-03-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	16-03-2020 12:15 til 16-03-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	23-03-2020 12:15 til 23-03-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	30-03-2020 12:15 til 30-03-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	06-04-2020 12:15 til 06-04-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA)

time	20-04-2020 12:15 til 20-04-2020 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	10.1-025 - teorirum (32)
Teacher	Henrik Bulskov (bulskov@ruc.dk) Jens Ulrik Hansen (jensuh@ruc.dk)
Content	Will be described at the course Moodle page.

Informatics: Business Intelligence and Big Data (BIBA) - Hand in

time	27-04-2020 10:00 til 27-04-2020 10:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

Informatics: Business Intelligence and Big Data (BIBA) - Oral exam

time	08-06-2020 08:15 til 09-06-2020 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	03.1-e09 - mødelokale (6)

Informatics: Business Intelligence and Big Data (BIBA) - Reexam hand in

time	05-08-2020 10:00 til 05-08-2020 10:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

Informatics: Business Intelligence and Big Data (BIBA) - Oral Reexam

time	17-08-2020 08:15 til 17-08-2020 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt