UNIVERSITEIT GENT

Studiefiche

Vanaf academiejaar 2017-2018

Databanken (C003803)

Cursusomvang (nominale waarden; effectieve waarden kunnen verschillen per opleiding)

Studiepunten	5.0	Studietijd	150 u	Contacturen	45.0 u

Aanbodsessies en werkvormen in academiejaar 2017-2018

A (semester 1)	Engels	werkcollege: PC-	37.5 u
		hoorcollege	5.0 u
		groepswerk	5.0 u

Lesgevers in academiejaar 2017-2018

Van den Poel, Dirk	EB07	Verantwoordelijk lesgever

Aangeboden in onderstaande opleidingen in 2017-2018	stptn	aanbodsessie
Master of Science in Statistical Data Analysis	5	A

Onderwijstalen

Engels

Trefwoorden

Information Systems, data Warehousing, SQL, Big Data, Apache Spark, Spark SQL, Python, Machine Learning, Apache MLlib, ML pipelines

Situering

The global objective of this course is to provide students with thorough theoretical as well as practical knowledge on the use and management of information. This knowledge can be of a strategic, a technical-analytical, as well as an organizational nature.

Inhoud

1 Importance of information management in general: which developments are at the basis of the increased importance of information use?
2 Data sources and data collection methods: which data sources are available to today's/tomorrow's data administrator, what is big data, how to deal with automized data collection methods such as scanning and internet? How to handle the nosql evolutions?
3 Building a database: which principles are at the basis of building a good database? How to build the structure (Entity Relationship Diagrams)?
4 Querying databases: SQL (structured query language) programming language (in casu: Oracle SQL and Hive/Presto) with exercises on large existing information systems.
5 Implementation/integration of MIS in the organization: which traps are related to the process of implementing a MIS in the organization, what are the principles of data warehousing?

Each of these topics will be treated in-depth based upon a mixture of interactive class discussions, real-life cases.

Begincompetenties

Basic knowledge of programming.

Eindcompetenties

1 Have knowledge of concepts of the management of information
2 They know how to effectively use internal and external data sources
3 They have to be able to understand and analyze the structure of databases.
4 They have to be able to query its content and be able to build applications to support these queries in an efficient way.

Creditcontractvoorwaarde

Toelating tot dit opleidingsonderdeel via creditcontract is mogelijk mits gunstige beoordeling van de competenties

Examencontractvoorwaarde

Dit opleidingsonderdeel kan niet via examencontract gevolgd worden

Didactische werkvormen

Groepswerk, hoorcollege, werkcollege: PC-klasoefeningen

Leermateriaal

- Oracle (TM) SQL en PL/SQL cursusmateriaal waaronder
- Oracle Database 10g: Introduction to SQL
- (wetenschappelijke) artikels
- Slides omtrent Apache Spark/Spark SQL/Python & Big Data
- Cases

Geraamde totaalprijs: 40 euro

Referenties

Vakinhoudelijke studiebegeleiding

Evaluatiemomenten

niet-periodegebonden evaluatie

Evaluatievormen bij periodegebonden evaluatie in de eerste examenperiode

Evaluatievormen bij periodegebonden evaluatie in de tweede examenperiode

Evaluatievormen bij niet-periodegebonden evaluatie

Werkstuk

Tweede examenkans in geval van niet-periodegebonden evaluatie

Examen in de tweede examenperiode is mogelijk

Eindscoreberekening

30% on SQL exercises/exam and 70% on Big Data/Apache Spark/Spark SQL/Python assignment