

## Database Management (E765026)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 3.0**                      **Study time 90 h**

**Course offerings and teaching methods in academic year 2023-2024**

A (semester 1)	Dutch	Gent	lecture	
			seminar	0.0h

**Lecturers in academic year 2023-2024**

De Tré, Guy	TW07	lecturer-in-charge
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**Offered in the following programmes in 2023-2024**

	crdts	offering
<a href="#">Bachelor of Science in Engineering Technology(main subject Electronics and ICT Engineering Technology)</a>	3	A
<a href="#">Linking Course Master of Science in Information Engineering Technology</a>	3	A

**Teaching languages**

Dutch

**Keywords**

Database systems, relational databases, SQL, OLTP

**Position of the course**

This course is intended as a basic course, which on the one hand provides the necessary theoretical foundations for understanding databases, and on the other hand is sufficiently focused on the practical use of databases, with main emphasis on the relational model.

**Contents**

- 1 Introduction: Databases, database models, and database systems
- 2 The relational database model
- 3 SQL: data definition and data manipulation language
- 4 Working with database systems: security, recovery after failure, concurrency control
- 5 Other database models

**Initial competences**

Being familiar with data structures and having basic programming skills.

**Final competences**

- 1 Have insight into the basic concepts of databases and database systems
- 2 Understand how relational database are built.
- 3 Be able to manipulate and query relational databases.
- 4 Understand how database systems work.

**Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

**Conditions for exam contract**

This course unit cannot be taken via an exam contract

**Teaching methods**

Seminar, Lecture

**Learning materials and price**

Handbook; G. De Tré, Principes van Databases, Pearson Education Benelux, Amsterdam, 2017 (ISBN:978-90-430-3580-4); indicative price: 50 EURO (Dutch)  
Additional course material is available on Ufora

## References

- R. Elmasri, S.B. Navathe, Fundamentals of Database Systems, Seventh Edition, Pearson Addison-Wesley, Boston USA, 2016 (ISBN: 9780133971330)  
J. Celko, SQL for Smarties, Morgan Kaufmann, 2014 (ISBN: 978-0128007617)  
S. Faroult, P. Robson, The Art of SQL, O'Reilly, 2006 (ISBN: 978-059600894-9)  
A. Molinaro, SQL Cookbook, O'Reilly, 2009 (ISBN 978-059600976-2)

## Course content-related study coaching

All exercise courses are supported by assistants.

Lecturer and assistants are available for additional explanation or individual support by appointment.

## Assessment moments

end-of-term and continuous assessment

## Examination methods in case of periodic assessment during the first examination period

Written assessment

## Examination methods in case of periodic assessment during the second examination period

Written assessment

## Examination methods in case of permanent assessment

Skills test, Assignment

## Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

## Extra information on the examination methods

- Periodic evaluation:
  - Open questions on theory
  - Exercises
- Permanent evaluation:
  - SQL database querying

## Calculation of the examination mark

Eerste en tweede zitting:

Periodegebonden evaluatie: 65%; niet-periodegebonden evaluatie: 35%.

Het eindcijfer is het gewogen gemiddelde van de periodegebonden en niet-periodegebonden evaluatie. Studenten kunnen voor dit opleidingsonderdeel enkel slagen wanneer ze voor beide onderdelen minimum 10/20 behalen.

Als studenten voor minstens één van de onderdelen minder dan 10/20 behalen dan gelden onderstaande regels:

- Indien men voor minstens één onderdeel van de evaluatie een 8/20 of 9/20 behaalt, kan men niet slagen voor het geheel van het opleidingsonderdeel. Als de eindscore toch een cijfer van 10 of meer op 20 zou zijn, wordt dit teruggebracht tot het hoogste niet-geslaagd cijfer, nl. 9/20.
- Indien men voor minstens één onderdeel van de evaluatie minder dan 8/20 behaalt, kan men niet slagen voor het geheel van het opleidingsonderdeel. Als de eindscore toch een cijfer van 8 of meer op 20 zou zijn, wordt dit teruggebracht tot het hoogste niet-delibereerbare cijfer, nl. 7/20.

Voor een deelscore van 10/20 of meer op één van de onderdelen is er puntenoverdracht naar tweede zitting.

## Facilities for Working Students

This course has an online exercise system for SQL.