GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2023-2024

Cloud Applications and Mobile (E736010)

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

Credits 6.0 **Study time 180 h**

Course offerings and teaching methods in academic year 2023-2024

A (semester 2)	Dutch	Gent	lecture

Lecturers in academic year 2023-2024

Sartor, Jennifer	TW06	staff member
Van Hoecke, Sofie	TW06	lecturer-in-charge

Offered in the following programmes in 2023-2024	crdts	offering
Master of Science in Electronics and ICT Engineering Technology(main subject Embedded Systems)	6	A
Master of Science in Electronics and ICT Engineering Technology(main subject ICT)	6	A

Teaching languages

Dutch

Keywords

cloud computing, cloud applications, mobile applications, SaaS, Web services, REST, web applications, IoT, IIoT, WoT, Semantic Web

Position of the course

The goal of this course is to learn students advanced knowledge on cloud computing and mobile applications. In particular, we focus on the principles, techniques and best practices that are relevant to the design and implementation of cloud applications on one hand and mobile applications on the other hand, as well as on hands-on experience with such applications.

Contents

- Introduction
- Cloud / PaaS / IaaS / CaaS
- Software as a Service
  - Web services
  - From IoT to WoT
  - Semantic Web
- Web-of-Things
- Mobile applications (more specifically Android app development)

Initial competences

Knowledge of object oriented programming, web development and security.
Computer networks course of at least 6 credits followed.

Final competences

1 Able to make a basic design and implementation of a distributed application (web/rest/soap/semantics/...)
2 Knowledge of common technologies for the realization of distributed applications and able to explain the differences between them
3 Able to make a basic design and implementation of a mobile Android application
4 Adopt a critical attitude in the design and evaluation of cloud infrastructures, based on a thorough technical understanding of the subject
5 Has a critical mind, is independent and evaluates alternatives when designing distributed applications

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

Lecture, Practical

Learning materials and price

Slides on the electronic learning environment

References

Course content-related study coaching

Assessment moments

end-of-term and continuous assessment

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

Written assessment with open-ended questions

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

Written assessment with open-ended questions

Examination methods in case of permanent assessment

Participation, 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

Exam is a written exam, open questions, theory questions are closed book, exercises are open book.
Permanent evaluation: graded on participation and assignments/projects. The evaluation of the according deliverables is based on the accuracy, completeness, efficiency and critical attitude of the source code and the reports submitted for assignments and projects.

Calculation of the examination mark

PGE 60% + NPGE 40%
In order to pass the course, the student must obtain at least 8/20 for the PE (exam) and the NPE (handing in all assignments and at least average score of 8/20). If this condition is not met, the final score will deviate from the calculated score if 10 or more was obtained and the student will receive score 9/20.