GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2016-2017

Multimedia (C002126)

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

Credits	6.0	Study time	180 h
Contact hrs	60.0 h		

Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	Dutch	lecture	30.0 h
		seminar: practical PC room classes	30.0 h

Lecturers in academic year 2018-2019

Lambert, Peter	TW06	lecturer-in-charge

Offered in the following programmes in 2018-2019	crdts	offering
Bachelor of Science in Computer Science	6	A

Teaching languages

Dutch

Keywords

Multimedia, video, images, audio, internet, coding, compression.

Position of the course

The main purpose of this course is to let the students familiarize with the principles of modern multimedia applications. Moreover, the students will gain some experience with setting up multimedia applications.

Contents

1 Basic concepts of multimedia
2 Representation of visual data
3 Color models for images and video
4 Basic principles of image and video processing
5 Basic principles of audio processing
6 Lossless and lossy compression algorithms
7 Multimedia formats and codecs
8 Multimedia standards

Initial competences

Programming in a high-level programming language

Final competences

1 To know and apply basic principles of image, video and audio processing.
2 To know and apply basic methods for the compression of still images and video.
3 To know and being able to apply basic sampling and quantization methods, especially in the context of digital-audio applications.
4 To know multimedia platforms and standards, and being able to compare them.
5 Being able to set up simple multimedia 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, self-reliant study activities, seminar: practical PC room classes

Learning materials and price

Annotated PowerPoint presentations
Fundamentals of Multimedia, Drew, ISBN 0130618721 Cost: 70 EUR

References

Fundamentals of Multimedia, Drew, ISBN 0130618721
Multimedia Processing, Rabiner, ISBN 013011393X
Digital Multimedia, Chapman, ISBN 0470858907

Course content-related study coaching

Coaching during computer-assisted problem solving
Contact with lecturer and coaches of excercises/project work (via e-mail and personally)

Evaluation methods

end-of-term evaluation and continuous assessment

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

Oral examination

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

Oral examination

Examination methods in case of permanent evaluation

Assignment, skills test

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

Periodical evaluation (during examination period): oral closed-book exam
Non-periodical evaluation (during semester): graded lab sessions + project work

Calculation of the examination mark

First examination period: global score = 50% non-periodical evaluation + 50% periodical evaluation (exam). Additional requirement for passing: to obtain at least 7/20 for each of both parts. If this requirement is not met, the global score is the least of the two obtained scores.
Second examination period: global score = 50% exam + 50% non-periodical evaluation (as obtained during the first examination period). If the score of the non-periodical evaluation during the first examination period is less than 7/20, an additional (individual) task will be defined in the second examination period. In this case, the global score = 50% exam + 50% additional task. Requirement for passing: to obtain at least 7/20 for the exam and, if applicable, also for the additional task. If this requirement is not met, the global score is the least of the two obtained scores.