

## Multimedia (C002126)

**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 2024-2025**

A (semester 2)

Dutch

Gent

lecture

seminar

**Lecturers in academic year 2024-2025**

Lambert, Peter

TW06

lecturer-in-charge

**Offered in the following programmes in 2024-2025**

[Bachelor of Science in Engineering Technology\(main subject Information Engineering Technology\)](#)

6

**offering**

A

[Bachelor of Science in Computer Science](#)

6

A

[Linking Course Master of Science in Information Engineering Technology](#)

6

A

[Preparatory Course Master of Science in Information Engineering Technology](#)

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

Seminar, Lecture

## Study material

Type: Syllabus

Name: Syllabus'

Indicative price: Free or paid by faculty

Optional: no

Additional information: The syllabus is provided free of charge in electronic form (PDF).

Type: Slides

Name: PowerPoint presentations'

Indicative price: Free or paid by faculty

Optional: no

Additional information: These are provided free of charge in electronic form (PDF).

## References

### Course content-related study coaching

Coaching during computer-assisted problem solving

Contact with lecturer and coaches of exercises/project work (via e-mail and personally)

### 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

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

Periodical evaluation (during examination period): written exam

Non-periodical evaluation (during semester): graded lab sessions + project work

### Calculation of the examination mark

**General:** students who eschew one or more parts of the evaluation can no longer pass the course as a whole. Total scores will be reduced to the highest non-deliberative quotation (7/20) in case the total score is higher.

**First examination period:** total score = 50% non-periodical evaluation + 50% periodical evaluation (exam). When students obtains less than 8/20 for at least one of the components, they can no longer pass the course as a whole. If the total score does turn out to be a mark of ten or more out of twenty, this is reduced to the highest fail mark (9/20).

**Second examination period:** total 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 8/20, an additional (individual) task will be defined in the second examination period. In this case, the total score = 50% exam + 50% additional task. When students obtains less than 8/20 for at least one of the components, they can no longer pass the course as a whole; if the total score does turn out to be a mark of ten or more out of twenty, this is reduced to the highest fail mark (9/20).