

## Machine Translation and Post-editing (A704028)

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

**Credits 5.0**                      **Study time 150 h**

**Course offerings and teaching methods in academic year 2024-2025**

A (semester 1)	English	Gent	practical lecture independent work
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**Lecturers in academic year 2024-2025**

Macken, Lieve	LW22	lecturer-in-charge
Daems, Joke	LW22	co-lecturer

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

	<b>crdts</b>	<b>offering</b>
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English, French)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English, German)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English, Italian)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English, Russian)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, English, Spanish)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, French)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, French, German)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, French, Italian)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, French, Russian)	5	A
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Master of Arts in Translation: a combination of at least two languages(main subject Dutch, German, Spanish)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, Italian)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, Russian)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, Spanish)	5	A
Master of Arts in Translation: a combination of at least two languages(main subject Dutch, Turkish)	5	A
Master of Arts in Technology for Translation and Interpreting	5	A
Postgraduate Certificate Computer-Assisted Language Mediation	5	A

## Teaching languages

English

## Keywords

Machine translation, post-editing

## Position of the course

Machine Translation (MT) is the translation of text by a computer. To produce high-quality translations, humans still need to intervene in the process either by making the input more suitable for MT (pre-editing) or changing the output (post-editing).

## Contents

The course deals with the following topics:

- Challenges for MT;
- Architecture of MT systems (rule-based MT, statistical MT and neural MT systems; interactive and adaptive systems; large language models (e.g. ChatGPT));
- Evaluation of MT output (automatic vs. manual evaluation methods);
- Post-editing and post-editing tools;
- Integration of MT in the translation workflow;
- Creation and evaluation of a customized MT engine.

## Initial competences

The student is proficient in English and has good knowledge of at least one of the following languages: Dutch, French, Spanish, German, Russian or Turkish.

## Final competences

- 1 The student has advanced knowledge of different machine translation architectures and can, based on that knowledge, critically assess different machine translation systems;
- 2 The student has advanced knowledge of the evaluation methods that are used in the field of MT;
- 3 The student has advanced knowledge of the post-editing process and the typical MT errors;
- 4 The student has knowledge of how MT is integrated in translation workflows.
- 5 The student can critically read and assess scientific work in the field of machine translation.

## Conditions for credit contract

This course unit cannot be taken via a credit contract

## Conditions for exam contract

This course unit cannot be taken via an exam contract

## Teaching methods

Lecture, Practical, Independent work

## Extra information on the teaching methods

Lectures and hands-on seminars  
Guided self-study/team work at home.

## Study material

Type: Slides

Name: Slides

Indicative price: Free or paid by faculty

Optional: no

Language : English

Type: Software

Name: Online MT engines, MutNMT, MATEO, adaptive MT systems (e.g. ModernMT or Lilt), generative AI-system (e.g. ChatGPT)

Indicative price: Free or paid by faculty

Optional: no

Online Available : Yes

## References

- Koehn, P. *Neural Machine Translation*. Cambridge University Press, 2020
- O'Brien, S., Balling L., Carl, M., Simard, M., Specia, L. *Post-editing of Machine Translation: Processes and Applications*. Cambridge Scholar Publishing, 2014

## Course content-related study coaching

Interactive support via UFORA and during the lectures. Individual and collective feedback

(Approved)

during lectures, or via UFORA.

### **Assessment moments**

end-of-term and continuous assessment

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

### **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

### **Extra information on the examination methods**

#### **First session:**

- Skills test (30%)
- Assignment (70%)

The skills test consists of several practical assignments that are completed during the classes.

The assignment consists of several more elaborate tasks.

#### **Second session:**

- Written exam (100%)

### **Calculation of the examination mark**

First session: skills test 30%; assignment 70%

Second session: exam 100%

In order to pass, students must participate in at least 80% of all evaluations and obligatory activities such as guest lectures. If a student is absent due to a legitimate reason, an individual alternative assignment can be given.

### **Facilities for Working Students**

Class attendance is strongly recommended.

Limited possibility of feedback via e-mail, restricted to answering specific questions.