# 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 2025-2026**

| | | | |
|---|---|---|---|
| A (semester 1) | English | Gent | lecture |
| | | | practical |
| | | | independent work |

**Lecturers in academic year 2025-2026**

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

**Offered in the following programmes in 2025-2026**

| | crdts | offering |
|---|---|---|
| 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 |
| Master of Arts in Translation: a combination of at least two languages(main subject Dutch, French, Spanish) | 5 | A |
| Master of Arts in Translation: a combination of at least two languages(main subject Dutch, German) | 5 | A |
| Master of Arts in Translation: a combination of at least two languages(main subject Dutch, German, Italian) | 5 | A |
| Master of Arts in Translation: a combination of at least two languages(main subject Dutch, German, Russian) | 5 | A |
| 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 |
| 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 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.