GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2024-2025

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

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	**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
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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 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.