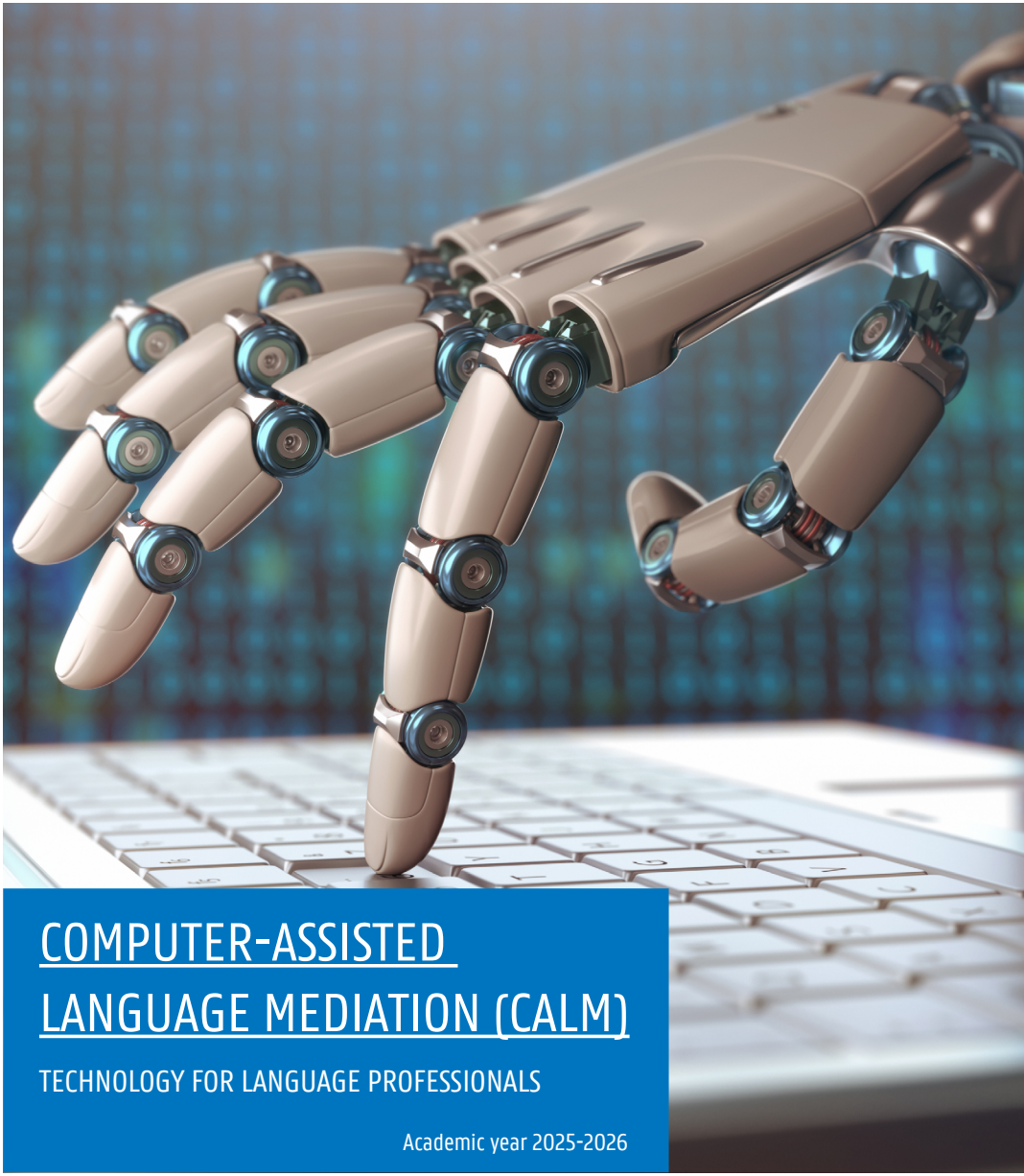
FACULTY OF ARTS
AND PHILOSOPHY



COMPUTER-ASSISTED LANGUAGE MEDIATION (CALM)

TECHNOLOGY FOR LANGUAGE PROFESSIONALS

Academic year 2025-2026

GHENT
UNIVERSITY

COMPUTER-ASSISTED LANGUAGE MEDIATION (CALM)

The CALM postgraduate program equips students for successful careers in the language, translation and communication industry. In today's professional translation environments, essential tools include translation memory and terminology management systems, data mining tools and software for speech recognition and machine translation. Language and communication professionals increasingly rely on **workflow and content management systems** and **authoring tools**. Additionally, maintaining **web pages** and **social media** channels have become part of their fundamental skill set.

As the landscape of language and communication technologies evolves, knowledge of **natural language processing** (NLP) and **Python programming** are crucial. These skills enable students to analyse and process human language more efficiently and develop robust applications. The integration of technology in learning and teaching also supports language learning through digital resources and communication technology applications.

The CALM postgraduate curriculum equips students with essential **technological skills** for today's information society. It complements **language and communication degrees** such as Masters in Translation, Interpreting, Multilingual Communication, Languages and Literature, Journalism Studies, Communication Studies and more.

Industry collaboration is a key aspect of the program. Students get the opportunity to gain real-world insights through guest lectures by strategic industry partners and a **three-month work placement**, providing relevant and hands-on experience in applying the acquired technological skills.

Many of our graduates receive job offers from leading companies in the language and communication industry, including Yamagata Europe, Flow Technical Communication, CrossLang, Untranslate, Daikin, Sofico, Hello Customer and Iyuno.

> *"The flexibility of the program allowed me to place a strong focus on the aspects of language technology that complement my own ambitions, which I found to have a very motivating effect."*
>
> Serafina Van Geertruyen (CALM, 2021-2022)

CALM is an advanced and high-quality professional postgraduate program that focuses on the technological skills and tools that are essential in today's language, translation and communication industry.

TARGET GROUP

CALM is designed for **Master's degree** holders seeking a career in the language, translation and communication industry while developing their technological skills. Candidates without a Master's degree but with relevant training or experience can also apply. They will have to demonstrate and submit proof of their elsewhere acquired competences or professional experience.

The program also caters to language professionals looking to **enhance** their **technological and digital expertise**.

COURSE STRUCTURE

The CALM postgraduate is a one-year, 60-credit academic program. Students choose 8 out of **13 available modules** (5 credits each) based on their interests.

The modules are complemented by a **3-month work placement** (20 credits) with a company in the language, translation or communication industry. Only students who have completed 40 credits (8 modules) are eligible for the placement.

All modules are taught during the first two trimesters of the academic year, followed by the work placement.

MODULES

INTRODUCTION TO LANGUAGE PROCESSING WITH PYTHON (BOOTCAMP: SEM 1, W1-3)

This course offers an introduction to **programming**, focusing on automatic text processing. No prior programming knowledge is required. **Python**, a widely used programming language for natural language processing, serves as the primary tool.

NLP AND LINGUISTIC ANALYSIS (SEM 1, W4-8)

This course provides a comprehensive introduction to the fundamentals of **natural language processing (NLP)**. Students will explore techniques for analyzing text at multiple levels (morphological, syntactic, semantic and discourse) to develop a deeper understanding of **computational language understanding and generation**. The course covers key theoretical concepts in language technology, such as language models and dynamic programming, alongside practical tasks like part-of-speech tagging, lemmatization, parsing and named entity recognition.

INTRODUCTION TO MACHINE LEARNING AND FEATURE ENGINEERING FOR NLP (SEM 1, W9-12)

Machine learning enables computers to learn from and make predictions based on data without being explicitly programmed.

This course provides a comprehensive introduction to **machine learning** techniques and the role of **feature engineering** in building effective models. Students will explore fundamental machine learning principles, learn to extract meaningful features from data, and generate new ones through analysis. **Hands-on exercises and real-world applications** will help them develop practical skills to implement these techniques and improve predictive accuracy and model interpretability.

NEURAL NETWORKS AND NLP APPLICATIONS (SEM 2, W1-9)

In recent years, **artificial neural networks** have excelled in a wide range of natural language processing tasks. Inspired by the human brain, these algorithms process input through interconnected neurons, passing through hidden layers to generate output. This course offers a comprehensive introduction to neural networks, covering key architectures, including the innovative **transformer** model. The course also explores **pre-trained large language models (LLMs)** and **fine-tuning** strategies for specific NLP tasks. Through a blend of theory and hands-on practice, students will actively develop and experiment with **Python code** in each session.

ETHICS FOR HUMAN-CENTERED AI (SEM 1, W4-12)

This course raises awareness of the **risks** involved in building and implementing AI-systems and explores what **'human-centered' AI** would look like. Each session addresses concerns raised by AI ethicists, such as environmental and financial costs, bias, stereotyping, data privacy, and copyright, along with existing or needed mitigation strategies. Grounded in current news, debates and recent academic research, the course emphasizes **fairness, accountability, and transparency** in AI development. It also explores key challenges in **human-centered design** of AI products.

AUDIOVISUAL LANGUAGE TECHNIQUES
(SEM 1, W4-12)

This course introduces techniques for various modes of **audiovisual translation** that enhance access to cultural content. Through hands-on sessions, students learn to create intralingual and interlingual **subtitles** and develop **audio descriptions** using professional software. Additionally, the course explores recent audiovisual translation technologies and scientific research driving **automation** in the field.

COMPUTER-ASSISTED LANGUAGE LEARNING
(SEM 1, W4-12)

This comprehensive course provides students with a strong foundation in Computer-Assisted Language Learning (CALL). It explores **recent technologies and development**, including Web 2.0, **mobile-assisted language learning**, **gamification**, **(L)MOOCS**, and **intelligent CALL**. A significant part of the course is dedicated to exploring and critically accessing various electronic CALL applications, focusing on different **language skills** such as reading, writing, speaking, and listening.

DIGITAL COMMUNICATION MANAGEMENT
(SEM 1, W4-12)

A strong foundation in **digital communication and marketing** is a key asset for language professionals. This course provides that foundation by digging deeper into the **three digital media types** -owned, earned and paid media- while covering key topics such as **digital marketing**, **search engine optimization**, **social media campaigns**, and **web analytics**. Students will not only analyze these topics in depth, but also learn to conceptualize and implement their own social media and digital marketing **campaigns**.

DIGITAL PUBLIC RELATIONS (SEM 2, W1-6)

This course prepares students to become professionals in today's communication industry by introducing them to the most important topics regarding **digital public relations**. Students acquire the knowledge and skills to strategically manage relationships with internal and external **stakeholders**. This course covers topics such as **social media use**, employee **brand ambassadorship**, **online authenticity**, the importance of **dialogue**, and **crisis communication**.

LOCALISATION (SEM 2, W1-6)

Localisation refers to the **cultural adaptation and translation** of digital content. This course covers key concepts and technical aspects of **localisation**. Students learn to localise different sources of digital contents like **software applications** (including user interfaces and online help files), **websites**, **games** and **e-learning content**.

MACHINE TRANSLATION AND POST-EDITING
(SEM 1, W4-12)

This comprehensive course provides students with a strong **theoretical foundation in machine translation**. It covers different machine translation **architectures**, **evaluation** methods, and the integration of MT into high-quality human translation workflows. Through hands-on sessions, students will learn to **build customized MT systems** and identify and **tackle** common **post-editing** challenges.

TECHNICAL WRITING (SEM1, W1-12)

This course introduces the fundamentals of **technical communication**. Through hands-on sessions, students learn how to write **technical documentation** using the principles of clear, concise, and consistent writing while considering the target audience. Students also gain experience with **industry-standard software**, giving them a head start on the job market.

TERMINOLOGY AND TRANSLATION TECHNOLOGY
(SEM2, W1-6)

This course introduces the fundamental principles of **terminology theory and terminology management**. Students gain hands-on experience with industry-standard translation tools. They will critically reflect on the importance and limitations of technology and gain experience with terminology extraction, terminology management, translation memories, and computer-assisted translation tools, with or without machine translation integration.

CAREER PROSPECTS

CALM is a labor market-oriented program designed for Master's degree holders seeking careers in the language, translation and communication industry. Graduates will have **ample job opportunities** as technical writers, language engineers, terminologists, e-learning developers, social media conversation managers, audiovisual translators, and more.

The program also caters to language professionals looking to refresh and update their technological skills.

INDIVIDUAL STUDY PROGRAMS

Students who prefer not to enrol in the full postgraduate program can create a **personalized curriculum** by selecting one or more modules.

> *Thanks to CALM I was introduced to a number of relevant aspects of the translation industry, which allowed me to start my job search full of confidence. I quickly found a full time job as a project manager in a translation company, where I apply my CALM knowledge on a daily basis.*
>
> Sarah Torfs (CALM 2016-2017)

PRACTICAL INFORMATION

APPLICATION PROCEDURE

→ International students

Follow the UGent application procedure (www.ugent.be/admission) and additionally submit all of the following documents:

- a **motivation letter** (in English) with **CV**;
- a legalised copy of the basic **diploma** and its **transcripts**; the diploma and its transcripts must also be translated by a sworn translator into either Dutch, English, French or German, if they were drafted up in any other language.
- two **recommendation letters**. At least one letter should be from an academic referee (e.g. the university where the applicant has been studying); the second letter can also be provided by a company at which the applicant has been gaining work experience.

The International Admissions Desk will first verify all submitted documents and check whether the application is complete. In a second step, the CALM steering committee will examine all applications on an individual basis. Applicants who meet all requirements will be invited for an online interview.

Deadlines:

- For international who need a visa: submit application before **April 1st 2025**.
- For students who do not need a visa: submit application before **June 1st 2025**.

Applicants will be notified of the outcome of their application and interview via email. Once students have been accepted, they will have to go through the administrative enrolment procedure.

→ Students with a degree from a Belgian or Dutch University

All applicants have to submit a motivation letter, a copy of the diploma obtained and its transcript of records via calm@ugent.be

There are three **deadlines** for the submission of applications: **July 21st 2025, August 12th 2025** and **September 12th 2025**. After these deadlines, the CALM steering committee will examine all applications on an individual basis.

Applicants will be notified of the outcome of their application via email. Once students have been accepted they will have to go through the administrative enrolment procedure, see also:

- www.ugent.be/inschrijven (for students with a Belgian degree);
- www.ugent.be/admission (for students with a Dutch degree).

LANGUAGE REQUIREMENTS

All teaching is carried out in **English**. Therefore, students must have sufficient fluency in written and spoken English (CEFR level B2).

TUITION FEE

Standard tuition fee: 2366 EUR.
Separate fees and procedures apply. Tuition fees may vary depending on individual students' curriculum. More information: **www.ugent.be/student/en/administration/tuition**.

GENERAL INFORMATION: https://www.ugent.be/lw/vtc/en/education/postgraduate/calm

ACADEMIC YEAR

- Trimester 1: September 22nd, 2025
- Trimester 2: February 9th, 2026
- Trimester 3: March 23rd, 2026 (work placement)

MORE INFORMATION

Contact: **Christophe Wybraeke** via calm@ugent.be