Marron
Spring 2025

Course Title:	**Taller de Traducción Ingeniería y Adelantos Tecnológicos**
Program and Track:	**Interpretación y Traduccíon: 6° Cuatrimestre**
Course ID:	**IT0628**
Cohort ID:	**6A1**

Description

This course provides the modern foundations for linguistic translation in the engineering sciences and in the broader field of advanced technologies. The course will focus on translation in selected engineering disciplines as well as translation related to advanced and emerging technologies that come primarily from the engineering sciences. The professional translational mapping tools developed in this course will be specific to Spanish and English translations, although such tools and methodologies can readily be extended to the translation of other languages.

Major elements of the course will include: i) the conceptual framework for the science of engineering; ii) the structure, function, and dominant paradigm of selected engineering disciplines; iii) the state of advanced and emerging technologies in selected engineering disciplines; iv) the elements of style and the use of standard conventions in English; v) a review of essential English grammatical structures; vi) Version Control Systems (VCSs) and elements of quality assurance and quality control (QAQC) applied to documents; vii) the professional use of Large Language Models (LLMs) in translation; viii) the direct translation of engineering texts and documents; and ix) the production of client deliverables.

Scope

1. Conceptual Framework for the Science of Engineering
    - 1.1 Historical Context
    - 1.2 Science vs. Engineering
    - 1.3 Major Engineering Disciplines

2. Structure, Function, and Dominant Paradigms
    - 2.1 Thomas Kuhn's "The Structure of Scientific Revolutions"
    - 2.2 Analysis of Selected Engineering Disciplines

3. The Elements of Style in Professional Writing
    - 3.1 Strunk and White's. "Elements of Style"
    - 3.2 Developing a Professional Voice

4. Review of Essential English Grammar
    - 4.1 Murphy's, "English Grammar in Use"
    - 4.2 The Yale Graduate Writing Center

5. Document QAQC and Version Control Systems
    - 5.1 Fundamental Concepts of QAQC
        - 5.1.1 Introduction to Document QAQC
        - 5.1.2 Frameworks for Document QAQC
    - 5.2 Introduction to Version Control Systems (VCSs)
        - 5.2.1 Git and Github

5.2.2 Installation of Git
5.2.3 Account setup in Github
5.2.4 Git VCS Workflow

6. Introduction to the Professional Use of LLMs in Translation
6.1 Professional Translators in the 21st century
6.2 AI in the Field of Translation (Google and OpenAI)
6.3 Application Programmer Interfaces (APIs), Software Development Kits (SDKs) , and Integrated Development Environments (IDEs)
6.4 API-Based Translation
6.4.1 Python
6.4.2 Cloud Translation API (Google LLM)
6.4.3 Open AI Translator API (GPT3.5 or GPT4.0)

7. Document Translation
7.1 Academic Texts and Papers
7.2 Manuals and Standard Operating Procedures (SOPs)
7.3 Request for Proposals (RFPs) and Proposals
7.4 Analytical Evaluations, White Papers, and Lab Reports

8. Production of Client Deliverables

Expectations

Students will be expected to:

- Attend all classes on time
- Be prepared to take notes and access materials on-line
- Participate in all class activities, including discussions and presentations
- Complete all assignments, quizzes, and the final exam

Exit Criteria

Upon the successful completion of the course the student will be able to:

- Demonstrate a basic understanding of the science of engineering
- Analyze selected engineering disciplines for their structure, function, and dominant paradigm
- Demonstrate a solid understanding of English grammatical structures and stylistic elements.
- Apply the principles of QAQC to document production by using a VCS
- Apply the principles of modern translation by using an API to access a LLM for English-Spanish translation
- Analyze and evaluate a wide variety of document types commonly found in the engineering sciences to produce clear, coherent, and accurate English-Spanish translations
- Produce professional quality client deliverables

Interim Evaluations	
Daily Work and Participation	10%
Homework	60 %
Interim Exam	30%

Final Grade	
Av. Daily Work and Participation	10%
Av. Homework	30 %
Av. Interim Exams	30%
Final Exam	30 %