CIHAN UNIVERSITY-SULAIMANIYA

Course Outline

2025-2026

Address:
Chwarchra-Opposite to Family Mall
Sulaymaniyah City
Kurdistan Region–Iraq
Tel: 07714695656,
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MODULE DESCRIPTION FORM

Module Information					
Module Title	**Machine Translation**				
Module Type	Theory & Practical		☐ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar** ☐ **Report** ☐ **Extra activity**		
Module Code					
Language	English				
ECTS Credits					
Module Level			**Semester of Delivery**		**3nd and 4th**
Administering Department	**Translation**		**College**	**Language**	
Lecturer	**Nawroz Muhammed Abdulrahman**				
Academic Title	**Assist. Lecturer**		**Qualification**		**Translation**
Module Tutor			**e-mail**	nawroz.mohammad@sulicihan.edu.krd	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date			**Version Number**		
Cycle of Study	Bachelor		**Form of Education**	Full time	

Relation with other Modules			
Prerequisite module		**Semester**	
Co-requisites module		**Semester**	

Cihan University-Sulaimaniya?
College of

Department: Translation
Discipline: Machine Translation
Stage: 3rd

Total Contact Hours:	**60**
Total Self Study Hours:	**110**
Total No. Hours:	**170**
ECTS:	**6**

No. of Weeks	Contact Hours					Self-Study					
	Theoretical	Practical	Lab	Project	Visit	Quiz	Reading	Assignment	Report	Midterm Exam.	Final Exam.
1st Week (Registration)	3										
2nd Week	3									20	30
3rd Week	2	1				10		10			
4th Week	2	1					10				
5th Week	2	1									
6th Week	3										
7th Week	3										
8th Week	2	1					10				
9th Week	2	1				10					
10th Week	1	2									
11th Week	1	2									
12th Week	1	2					10	10			
13th Week	1	2									
14th Week	1	2									
15th Week (Pr. Final Ex	3										
16th Week (Final Exam.)											
TOTAL											

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	**Human vs. Machine Translation (Part I)** • Definitions: Source Text vs. Target Text. • The concept of equivalence in the digital age.
Week 2	**History & Paradigms (Part II)** • From Rule-Based (RBMT) to Statistical (SMT). • The shift to Neural Machine Translation (NMT).
Week 3	**Inside the "Black Box" (Part I)** • Introduction to Neural Networks. • Encoders, Decoders, and Architecture.
Week 4	**How Computers "Read" (Part II)** • Word Embeddings (Vectors). • The "Attention" mechanism in NMT.
Week 5	**Human Evaluation (Part I)** • Assessing MT output manually. • **Adequacy** (meaning) vs. **Fluency** (grammar).
Week 6	**Automatic Evaluation (Part II)** • How algorithms score translation. • Metrics: **BLEU**, **TER**, and their limitations.
Week 7	**Pre-Midterm Review** • Synthesis of History, NMT Architecture, and Evaluation • Mock Exam / Q&A.
Week 8	**MIDTERM EXAMINATION**
Week 9	**Pre-editing Source Texts (Part I)** • The "Garbage In, Garbage Out" principle. • Analyzing text complexity.
Week 10	**Writing for Global Audiences (Part II)**

	• Controlled Natural Language (CNL) rules. • Optimizing texts for NMT engines.
Week 11	**Fundamentals of Post-editing (Part I)** • Defining Post-editing (PE) vs. Revision. • **Light PE** vs. **Full PE**.
Week 12	**Post-editing in Practice (Part II)** • Minimizing Temporal, Cognitive, and technical effort. • ISO and TAUS guidelines.
Week 13	**Ethics and Society** • Bias in training data (e.g., gender bias). • Data privacy and the "Human in the Loop."
Week 14	**Course Revision** • Review of Pre/Post-editing workflows.
Week 15	**Revision**
Week 16	**FINAL EXAMINATION**

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	• Distinguish between different MT paradigms (Rule-based, Statistical, and Neural) and their relationship to human translation. • Understand the fundamental mechanics of Neural Machine Translation, including neural networks and word embeddings. • Apply methods for evaluating MT quality using both human (adequacy/fluency) and automatic (BLEU, TER) metrics. • Implement Pre-editing strategies to prepare source texts for optimal MT output. • Perform Post-editing (Light and Full) effectively, adhering to industry guidelines. • Critically analyze the ethical implications of MT, including bias, data privacy, and the future of the translation profession.
Module Learning Outcomes	• **Knowledge:** Students will define key MT terminology and explain the difference between MT for assimilation vs. dissemination.

	• **Skills:** Students will demonstrate competence in "writing for global audiences" (Pre-editing) and correcting raw MT output (post-editing) to professional standards. • **Attitude:** Students will develop a critical, ethical approach to AI tools, viewing them as aids rather than replacements for human expertise.

Learning and Teaching Strategies	
Strategies	

Module Evaluation					
Assessment Types		**Time/Number**	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**		5%		
	Participation & Attendance		10%		
	Projects / Lab.		10%		
	Presentation		5%		
Summative assessment	**Midterm Exam**	2hr	20%	7th	
	Prefinal Pr. Exam	2hr	%	15th	
	Final Exam	3hr	50%	16th	
Total assessment			100% (100 Marks)		

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	• Kenny, D. (Ed.). (2022). *Machine translation for everyone: Empowering users in the age of artificial intelligence*. Language Science Press.	
Recommended Texts	• Koehn, P. (2020). *Neural Machine Translation*. Cambridge University Press.	

	• Bowker, L., & Ciro, J. B. (2019). *Machine translation and global research*. Emerald Publishing. • ISO 18587:2017. *Translation services — Post-editing of machine translation output: Requirements*.	
Websites		

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C - Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

- **Cycle of studies - choose one of the three options: Bachelor «1», Master «2», PhD. «3»**
- **(Exam: Oral Examination, Written Exam), and (Continous Evaluation(CE), Portfolio).**
- **Discipline status (Content) - for the Bachelor level, choose one of the options: FD (Fundamental (General) Discipline), PF (Preparatory Disciplines in the Field), SD (Specialty Disciplines), CD (Complementary Disciplines), DU (Disciplines based on the University's options).**
- **Discipline status (compulsoriness) - choose one of the options**
  a. MD (Mandatory discipline)
  b. OD (Optional Discipline)
  c. ED (Elective (Facultative) Discipline).

Approved by Head of the Branch / Department

Signature	
Date	
Name	

Approved by Curriculum Development Committee and Bologna Process Committee	
Signature	
Date	
Name	