City University of Hong Kong
Course Syllabus

offered by Department of Linguistics and Translation
with effect from Semester A 2017 / 18

Part I   Course Overview

Course Title:	Human-Machine Interactive Translation
Course Code:	LT5628
Course Duration:	One Semester
Credit Units:	3
Level:	P5
Medium of Instruction:	English, supplemented by Chinese, in situations where English-Chinese translation is involved.
Medium of Assessment:	English, supplemented by Chinese, in situations where English-Chinese translation is involved.
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	LT5603 Theory of Translation CTL5603 Theory of Translation LT5604 Translation Methodology CTL5604 Translation Methodology LT5411 Computational Linguistics CTL5411 Computational Linguistics
Equivalent Courses: *(Course Code and Title)*	CTL5628 Human-Machine Interactive Translation
Exclusive Courses: *(Course Code and Title)*	Nil

Part II   Course Details

1.   Abstract

This course aims to study the general principles and advanced technologies of machine translation (MT) and computer(-aided) translation (CAT), with a focus on the aspect of human-machine interaction to enhance the productivity in the translation industry. Students will acquire a critical understanding of relevant concepts, methodologies and practical techniques of MT/CAT through hands-on training. Making use of these concepts and techniques, they will be able to develop creative solutions to translation tasks and conduct high-quality and high-speed professional translation.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick ✓ where appropriate)		
			A1	*A2*	*A3*
1.	Identify and apply the key concepts, principles and methodologies in human-machine interaction involved in the practical use of MT/CAT for professional translation.		✓	✓	
2.	Apply the available technologies of MT/CAT for efficient and quality professional translation		✓	✓	✓
3.	Formulate strategies for efficient and effective use of various MT/CAT tools for language resource development for productivity enhancement		✓	✓	✓
4.	Evaluate MT/CAT systems and services by critiquing their translation quality and user-friendliness of facilities for human-machine interaction		✓	✓	✓
		100%			

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.
A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
A3: *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4			
1	**Lectures** towards the above outcomes to explain and illustrate the basic issues involved, for a practical solution for each of them	✓	✓	✓	✓			2 hours
2	**Readings** of lecture notes and selected chapters from textbooks and the user guides of available MT systems	✓	✓	✓	✓			
3	**Tutorials** to help students to resolve their problems involved in hand-on training; Question-answering sessions, exercises and practical work, discussion of assignments	✓	✓	✓	✓			1 hour

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.						Weighting	Remarks
	1	2	3	4				
Continuous Assessment: 50%								
3-4 assignments on notions, principles and methodologies of MT/CAT and/or on translation practice using available MT/CAT system(s) (10% each);	✓	✓	✓	✓			10% each	
Participation in class and presentation (10%);	✓	✓	✓	✓			10%	
Quizzes (optional) (10%);	✓	✓	✓	✓			10%	
Examination: 50 % (duration: 2 hours) Two-hour examination on basic conceptions and know how about the MT/CAT system(s) in use. (CILO No. 1-4)								
							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. 3-4 assignments 2. Participation in class and presentation 3. Quizzes 4. Examination	Knowledge, attitude, ability, creativity, accomplishment and performance in completing and/or presenting demons and/or assignments Marks	1. Excellent knowledge of major issues, concepts, ideas, principles and techniques in human-machine interactive translation. 2. Excellent, creative application of linguistic and human-computer interaction knowledge to analysis and facilitation of basic tasks and key issues in translation. 3. Very active participation and high performance.	1. Good knowledge of major issues, concepts, ideas, principles and techniques in human-machine interactive translation. 2. Good application of linguistic and human-computer interaction knowledge to analysis and facilitation of basic tasks and key issues in translation. 3. Active participation and good performance.	1. Adequate knowledge of major issues, concepts, ideas, principles and techniques in human-machine interactive translation. 2. Fair application of linguistic and human-computer interaction knowledge to analysis and facilitation of basic tasks and key issues in translation. 3. Adequate participation and fair performance.	1. Basic familiarity with the subject matter. 2. Marginal ability to apply linguistic and human-computer interaction knowledge to analysis and facilitation of basic tasks and key issues in translation. 3. Marginal participation and marginal performance.	1. Poor familiarity with the subject matter. 2. Poor ability or fail to apply linguistic and human-computer interaction knowledge to analysis and facilitation of basic tasks and key issues in translation. 3. Poor participation and poor performance.

Part III   Other Information (more details can be provided separately in the teaching plan)

1. **Keyword Syllabus**
   (An indication of the key topics of the course.)

   1. Machine translation (MT) and Computer-aided translation (CAT) vs. fully-automatic and high-quality translation (FAHQT); CAT vs. human-aided machine-translation (HAMT).

   2. The "Proper place" of human and machine in translation industry: Routine work for machine and creative work for human; Analysis of translation process and necessary tools, translation quality vs. productivity.

   3. Basic principles and practices of human-machine interactions in translation industry.

   4. Human-machine interaction for language resource development to enrich MT/CAT, towards a fuller utilization of language technologies.

   5. Practical training for hands-on experience of using available MT system(s) and CAT tools for high-quality and high-speed professional translation.

   6. Current development of MT/CAT technologies from the perspective of translation studies.

2. **Reading List**
2.1 **Compulsory Readings**
   (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Lecture notes/slides for the course
2.	Selected papers/chapters on topics of human-machine interactive translation
3.	Selected tutorials on key tasks of human-computer interaction in system implementation

2.2 **Additional Readings**
   (Additional references for students to learn to expand their knowledge about the subject.)

1.	Relevant chapters in the recommended reading list or from online tutorial
2.	Advanced and/or related topics on human-computer interaction in transaltion

Recommended Reading

1. Sin-wai Chan. 2015. *The Routledge Encyclopedia of Translation Technology*. London: Routledge.
2. Pushpak Bhattacharyya. 2015. *Machine Translation*. Boca Raton: Taylor & Francis.
3. Joseph Olive, Caitlin Christianson & John McCary (eds.). 2011. *Handbook of Natural Language Processing and Machine Translation*. New York: Springer.
4. Yorick Wilks. 2008. *Machine translation: Its scope and limits*. London: Springer.
5. Lynne Bowker. 2002. *Computer-aided Translation Technology: A practical introduction.* Ottawa: University of Ottawa Press
6. Sin-wai Chan (ed.) 2001. *Translation in Hong Kong: past, present and future*. Hong Kong : Chinese University Press
7. John Hutchins. 2003. Machine translation: general overview. In R. Mitkov (Ed.) *The Oxford Handbook of Computational Linguistics*, Chapter 27, pp.501-511. Oxford: Oxford University Press.

8. Kay, M. (1980). The proper place of men and machines in language translation. Xerox PARC working paper, 1980. Reprinted in *Machine Translation* 12:3-23, 1997.

9. Krings, Hans P. 2001. *Repairing texts: empirical investigations of machine translation post-editing processes*. Kent, Ohio: Kent State University Press

10. Nagao, M. 1984. A framework of a mechanical translation between Japanese and English by analogy principle. In Elithorn, A., and R. Banerji (Eds.) *Artificial and Human Intelligence*, pp. 173-180. Amsterdam: North-Holland.

11. Nirenburg, S., H. Somers, and Y. Wilks. 2003. *Readings in Machine Translation*. Cambridge, Mass.: MIT Press

12. Sager, Juan C. 1994. *Language engineering and translation: consequences of automation*. Amsterdam: Benjamins.

13. Somers, Harold (ed.) 2003. *Computers and Translation*. John Benjamins.

14. Trujillo, Arturo. 1999. *Translation Engines: Techniques for machine translation*. London: Springer