City University of Hong Kong
Course Syllabus

offered by Department of Linguistics and Translation
with effect from Semester B 2018/19

Part I Course Overview

Course Title:	Introduction to Language Technology
Course Code:	LT2231
Course Duration:	One Semester
Credit Units:	3
Level:	B2
Proposed Area: *(for GE courses only)*	☐ Arts and Humanities ☐ Study of Societies, Social and Business Organisations ☐ Science and Technology
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	NIL
Precursors: *(Course Code and Title)*	NIL
Equivalent Courses: *(Course Code and Title)*	CTL2231 Introduction to Language Technology
Exclusive Courses: *(Course Code and Title)*	NIL

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to teach students basic concepts and practical issues in language processing for implementation of representative general and linguistic application software and to teach students basic computer programming concepts and skills for writing simple language applications.

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 basic issues of language technology in a bilingual context.		✓	✓	
2.	Identify basic design principles of language technology applications, including electronic publishing, word processing, presentation and database management applications.		✓	✓	
3.	Design, competently and creatively, and write simple computer programs that manipulate linguistic data as characters and strings.		✓	✓	✓
** If weighting is assigned to CILOs, they should add up to 100%.*		100%			

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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.)

Final details will be provided to students in their first week of attendance in this course.

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3				
1	**Readings** – Reading lecture notes, book chapters, articles and other kinds of supplementary materials.	✓	✓	✓				
2	**Lectures** – Theories, concepts, models, explanations, illustrations, synthesis of readings, in-class activities.	✓	✓	✓				

3	**Tutorials Discussions** – Discussing and answering tutorial questions; analyzing and discussing tutorial and homework assignments.	✓	✓	✓				
4	**Tutorial and Homework Assignments –** Classwork and homework assignments that require students to apply concepts and theories and help them develop basic skills.	✓	✓					
5	**Programming Exercises –** Learning basic programming concepts and skills.			✓				

4. Assessment Tasks/Activities (ATs)

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

Final details will be provided to students in their first week of attendance in this course.

Assessment Tasks/Activities	CILO No.						Weighting*	Remarks
	1	2	3					
Continuous Assessment: 50%								
Tutorial assignments In-class participation, diligence and, where possible, willingness and ability to analyze and explore	✓	✓					10%	
Quizzes Mastery of concepts and techniques, ability to analyze and explore, ability to implement programs according to specifications. Questions will be set to test basic factual knowledge and skills. Questions will also be set to test students' understanding of key concepts, ability to critically analyze and explore and ability to implement programs according to specifications.	✓	✓	✓				20%	
Homework assignments Use of language technology software for text analysis	✓	✓	✓				20%	
Examination: 50% (duration: 2 hours) Mastery of concepts and techniques, ability to analyze and explore, ability to implement programs according to specifications. Questions will be set to test basic factual knowledge and skills. Questions will also be set to test students' understanding of key concepts, ability to critically analyze and explore and ability to implement programs according to specifications. (CILO No. 1-3)								
** The weightings should add up to 100%.*							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. Tutorial assignments	Ability to engage in meaningful discussion and to complete tasks	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Quizzes	Ability to demonstrate knowledge on theory and practice of language technology	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. Homework assignments	Ability to use language technology software for text analysis	High	Significant	Moderate	Basic	Not even reaching marginal levels
4. Examination	Ability to demonstrate knowledge on theory and practice of language technology	High	Significant	Moderate	Basic	Not even reaching marginal levels

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.)

- English and Chinese character encoding and manipulation of text data in a computer.
- Fundamental principles and implementation issues of linguistic computer applications including electronic publishing, word processing, presentation and database management software.
- Fundamental concepts and basic skills of computer programming for linguistic applications.

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.	Steven Bird, Ewan Klein, and Edward Loper. 2014. *Natural Language Processing with Python – Analyzing Text with the Natural Language Toolkit*. Accessed at http://www.nltk.org/book/ Or: Selected topics of Java programming from the Java Tutorials Online provided by Oracle at https://docs.oracle.com/javase/tutorial/ (Depending on whether the course is taught with Python or Java)
3.	L.A. Bucki. 2002. *Learning Computer Applications: Projects and Exercises. DDC* Publishing.

2.2 Additional Readings

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

1.	M. Campione and K Walrath. 1998. *The Java Tutorial: Object-oriented programming for the Internet*. Addison-Wesley
2.	O. Masson. 2000. *Programming for Corpus Linguistics: How to do text analysis with Java*. Edinburgh University Press.
3.	P.J. Pratt and J. Adamski. 2002. *Concepts of Database Management*, 4th edition. Course Technology, Thomson.
4.	J. Pollock. *JavaScript: A Beginner's Guide*. Emeryville, California: McGraw-Hill, 2004.
5.	P. Wilton. *Beginning JavaScript*. Indianapolis: Wiley, 2004.
6.	張普. 1992. 漢語信息處理研究. 北京語言學院出版社.