

Short Title:	Linguistics for Human Language Technology APPROVED
Full Title:	Linguistics for Human Language Technology
Module Code:	MHLT H6013
ECTS credits:	10
NFQ Level:	9
Module Delivered in	1 programme(s)
Module Contributor:	Irene Murtagh
Module Description:	<p>The aim of this module is: To provide students with in-depth skills and knowledge of the role of language structure and grammatical description in natural language processing as a human language technology. To give students the skills necessary to apply a wide range of techniques for linguistic analysis at the morpho-syntax and semantics interface. To provide students with the necessary theoretical skills and practical applications framework knowledge for research in linguistics for human language technology. To instil an in-depth understanding of the importance and value of quality in empirical analysis to human language technology and NLP.</p>
Learning Outcomes:	
<i>On successful completion of this module the learner will be able to</i>	
<ol style="list-style-type: none"> 1. Articulate the role and place of language structure and grammatical description in a HLT / NLP strategy 2. Apply best practice research methods using authentic natural language data in linguistic analysis. 3. Undertake research-motivated empirical analysis of human languages. 4. Apply advanced knowledge and skills in the applications of the functional models of language and grammars in HLT / NLP. 	

Module Content & Assessment

Indicative Content
The Nature of Linguistic Analysis (10%) Structuralist and generative grammars, Morphology and syntax, Morphological analysis, Theoretical functional linguistics framework.
Morphological Processes (10%) Models of representation, Inflectional and derivational morphology, Complex morphological processes.
Constituent Structure (10%) Representing syntax, Constituency and dependency, Grammatical relations.
Argument Structure and Voice (10%) The importance of the lexicon in a functional grammar, Verbal argument structure and voice, Accusative vs. ergative distinction in language families, Case marking alignments, Dative shift and reflexives.
Verbs, Valence and Voice (10%) Verbal argument structure and voice, Passives, applicatives and reflexives, Valency adjusting operations.
Semantic and Syntactic Arguments (10%) Control, Dependency relations, Causation and external events.
Complex Sentence Constructions and Nexus Juncture Relations (10%) Coordination (independent structures), Subordination: Relative clauses and structural dependency), Cosubordination (operator dependency), Complex predicates and multi-verb clauses.
Syntax and Pragmatics (10%) Information structure, Speech acts and performatives, Topic, Focus.
Language Typology in an Areal Perspective (10%) Morphological typology, Syntactic typology, Linguistic complexity (system / objective).
Current issues in Linguistic analysis for HLT and NLP (10%) Current issues in linguistic analysis.

Indicative Assessment Breakdown	%
Course Work Assessment %	100.00%

Course Work Assessment %				
<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Practical/Skills Evaluation	Practical exercises based on lecture material	1,2,3,4	20.00	Every Week
Project	The student will be examined on empirical issues to do with core linguistic, morphosyntactic and lexicon structure and how these are formally characterised.	1,2,3,4	40.00	n/a
Project	The student will be examined on the operation of the bi-directional linking system between morphosyntax and semantics, the semantics of Aktionsarten and situation types in states of affairs, the formalisation of event structure and complex predicates.	1,2,3,4	40.00	n/a

No Final Exam Assessment %

Indicative Reassessment Requirement
Coursework Only <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i>

ITB reserves the right to alter the nature and timings of assessment

Indicative Module Workload & Resources

Indicative Workload: Full Time		
Frequency	Indicative Average Weekly Learner Workload	
Every Week		28.00
Every Week		28.00
Every Week		56.00

Indicative Workload: Part Time		
Frequency	Indicative Average Weekly Learner Workload	
Every Week		28.00
Every Week		28.00
Every Week		56.00

Resources

Recommended Book Resources

Thomas E. Payne, *Exploring language structure*, Cambridge, UK ; Cambridge University Press, 2006. [ISBN: 9780521671507]

Supplementary Book Resources

Mark Aronoff, Kirsten Fudeman, *What is Morphology*, Wiley-Blackwell [ISBN: 1405194677]

Daniel Jurafsky, James H. Martin, *Speech and language processing*, Upper Saddle River, NJ Pearson 2009 [ISBN: 0135041961]

Brian Nolan 2012, *The Structure of Modern Irish: A Functional Account*, Equinox Publishing Co. Sheffield [ISBN: 9781845534219]

Brian Nolan and Elke Diedrichsen 2013, *Linking Constructions into functional linguistics – The role of constructions in RRG grammars*, John Benjamins Amsterdam and New York

Emma L. Pavey 2010, *The Structure of Language - An Introduction to Grammatical Analysis*, Cambridge University Press Cambridge

Maggie Tallerman 2005, *Understanding Syntax (2nd Edition)*, Hodder Arnold London

R. L. Trask 1997, *A student's dictionary of language and linguistics*, Arnold London [ISBN: 0340652667]

Robert D. Van Valin jr. 2005, *Exploring the Syntax Semantics interface*, Cambridge University Press UK [ISBN: 0-521-01056]

Robert D. Van Valin jr. 2001, *Introduction to Syntax*, Cambridge University Press Cambridge

This module does not have any article/paper resources

Other Resources

Book Chapter: Nolan and Salem. pp. 312–346: Wataru Nakamura 2011, *New perspectives in Role and Reference Grammar*, Cambridge Scholars Publishing, Newcastle upon Tyne

Module Delivered in

Programme Code	Programme	Semester	Delivery
BN_KMHLT_R	Master of Science in Computing in Multimodal Human Language Technology	1	Mandatory