

# UNIVERSITY OF MALTA

## Institute of Linguistics

### M.Sc Language and Computation

#### Programme of Studies: Supplementary Study Units

##### **Notes:**

The following is a list of existing study units, which are offered as electives to students following the M.Sc. in Language and Computation.

Students may select up to 12 ECTS, constituting the foundational component of their taught M.Sc.

Units are divided into three streams, and students will be guided as to which stream to select foundational units from, depending on their undergraduate degree.

**The description of these study units can be found online by going to:**

**<http://www.um.edu.mt/linguistics/studyunit/<code>/> and replacing <code> with the study unit code (e.g. LIN3501).**

#### **Stream 1: For students with a background in Human Language Technology, Computational Linguistics, or a related area**

**Year** (These units start in Semester 1 and continue in Semester 2).

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

LIN3501	Text Mining and Information Extraction	6 ECTS
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##### **Semester 1**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

CPS1005	Mathematics of Discrete Structures	5 ECTS
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CPS2001	Programming Paradigms	5 ECTS
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##### **Semester 2**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

CPS2004	Object-oriented programming and design patterns	5 ECTS
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ICS2210	Data Structures and Algorithms 2	5 ECTS
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ICS1015	Logic Programming	5 ECTS
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LIN3506	Text Analysis: Psychological, Affective and Forensic Applications	4 ECTS
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CPS1005	Discrete Mathematics for Computing Science	5 ECTS
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## **Stream 2: For students with a background in Theoretical Linguistics or a related area**

### **Semester 1**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

ICS1251	Python Programming: A practical Introduction	6 ECTS
LIN3011	Data Driven Natural Language Processing	6 ECTS
LIN3503	Speech Technology	6 ECTS
LIN3502	Multimodal Interaction and Communication	6 ECTS
LIN2571	Computational Morphology And Syntax	6 ECTS
CPS1005	Mathematics of Discrete Structures	5 ECTS

### **Semester 2**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

ICS1133	Natural Language Programming	4 ECTS
ICS1015	Logic Programming	5 ECTS
LIN2031	Machine Learning for Natural Language Processing	6 ECTS
LIN3504	Multilingual Computing	6 ECTS
LIN3506	Text Analysis: Psychological, Affective and Forensic Applications	4 ECTS
CPS1005	Discrete Mathematics for Computing Science	5 ECTS

### **Stream 3: For students with a background in Computer Science, Engineering, or a related area**

**Year** (These units start in Semester 1 and continue in Semester 2).

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

LIN2024	From Data to Theory in Linguistics	4 ECTS
LIN3501	Text Mining and Information Extraction	6 ECTS

#### **Semester 1**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

LIN2022	Models of Grammar	4 ECTS
LIN3011	Data-Driven Natural Language Processing	6 ECTS
LIN3503	Speech Technology	6 ECTS
LIN3502	Multimodal Interaction and Communication	6 ECTS
LIN2571	Computational Morphology and Syntax	6 ECTS

#### **Semester 2**

**Elective Units** (Elective units are offered subject to availability and timetable constraints).

ICS1133	Natural Language Programming	4 ECTS
ICS1015	Logic Programming	5 ECTS
LIN2031	Machine Learning for Natural Language Processing	6 ECTS
LIN3504	Multilingual Computing	6 ECTS
LIN3506	Text Analysis: Psychological, Affective and Forensic Applications	4 ECTS