



Co-funded by the
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**i. Name of the course**

Advanced Research Methods in Linguistics 2

ii. Level of the course

MA

iii. Workload

6 ECTS

iv. Institution

University of Malta

v. Course instructor(s)

Paul Marty

vi. Brief course description

The aim of this course is to provide MA students with a solid grounding in behavioural research methods for linguistics, to equip them with practical skills for conducting experimental linguistic research and to provide them with first-hand research experience.

The lectures cover various topics in experimental linguistics, from core experimental techniques to ethical considerations, each of which is approached both from a theoretical and practical perspective. The main focus of the course, however, is to guide students to pursue small individual projects related to their MA dissertation topic. Depending on the student's topic and the progress of their research, this project may take any one of the following forms:

- Creating the materials and design for a pilot study
- Programming an online experiment (e.g., a web-based survey)
- Analysing original data or data of interest from published studies, or reanalysing data using other analysis techniques (e.g., Bayesian statistics)

The purpose of the project is primarily to enhance problem-solving skills and provide further motivation for the students to pursue their research independently, while also complementing the work leading up to their MA dissertation. Students may also take this opportunity to conduct a pilot study prior to conducting a larger-scale study for their MA dissertation.

In the last class, students present the results of their project in front of fellow students and faculty staff and each presentation gets discussed (short conference format: 10/15-minute presentation followed by 5-minute Q&A session). At the end of the course, students submit a research report (about 3,000 words). The report takes the form of a short experimental paper similar in essence to those published in scientific journals and includes a discussion of the comments and potential concerns raised during the presentation.

vii. Research related subject

Quantitative research methods, experimental research designs, language data science

viii. Tools and data the students work with

- The tools that the students work with are determined by considering their domain of inquiry, the progress of their research and their programming skills. In general, the students will be introduced to tools for managing, annotating and analysing data (Excel, Jamovi, R, Praat, ELAN), for building online tasks/surveys (Qualtrics, Gorilla task builder, PennController for IBEX), for recruiting participants (Prolific) and for making their data and results publicly available (OSF, lingbuzz).
- The students are encouraged to work with their own data. If a student has not collected any data yet, open source data related to the student’s chosen topic or research method is provided to exemplify certain aspects of data collection and analysis that are of primary interest for the student.

ix. Topics

The course covers a range of classical topics in experimental linguistics including experimental measurement techniques, experimental design and design sensitivity, sampling methods, data collection and management, statistical inferences and hypothesis testing, ethical issues, among others. The list of topics is usually finalised at the start of the semester and tailored to the more immediate research goals of the students enrolled in the course. Tools for managing and analysing data, creating online studies, etc. are introduced in the course of the semester based on the students’ self-reported needs.

x. Learning outcomes

The learning outcomes of this course are both general and student-specific.

1. General learning outcomes:

By the end of this course, the student will be able to:

- appreciate how knowledge is created in experimental linguistics
- create small-scale psycholinguistics experiments
- present research results to an audience/reader

2. Student-specific learning outcomes:

By the end of this course, the student will be able to:

- select or devise an experimental method suitable for their research question
- formulate the rationale for their choice of design and data analyses
- fine-tune their experimental studies for their MA dissertation

xi. Overview of evaluation

| Rubric | Weighing |
|-------------------------------|----------|
| Oral presentation | 25 % |
| Final written research report | 75% |

xii. Career paths

1. Academia
2. Language data science and, more generally, all careers involving the collection and analysis of quantitative data (e.g., marketers, government agencies, economists, research groups)

xiii. Readings

Readings partly depend on the student's research focus and chosen topic. The references listed below are relevant to various topics in experimental linguistics and they are provided to the students to ensure a common base of knowledge and practical skills. Supplementary readings are determined in the course of the class typically through discussions with the students and their MA supervisor(s).

Baayen, R. H. (2008). *Analyzing Linguistic Data: A Practical Introduction to Statistics Using R*. Cambridge University Press.

Desagulier, G., Desagulier, G., & Amboy. (2017). *Corpus linguistics and statistics with R*. Springer International Publishing.

Fink, A. (1995). *How to ask survey questions*. London: Sage.

Gillioz, C., & Zufferey, S. (2020). *Introduction to experimental linguistics*. John Wiley & Sons.

Goodall, G. (2021). *Theory and Experiment in Syntax*. Routledge.

Gries, S. T. (2021). *Statistics for Linguistics with R*. De Gruyter Mouton.

Johnson, K. (2008). *Quantitative methods in linguistics*. John Wiley & Sons.

Kumar, Ranjit (2005). *Research Methodology: A Step-by-Step Guide for Beginners*. London: Sage.

Woods, A., P. Fletcher and A. Hughes (1986). *Statistics in language studies*. Cambridge: Cambridge University Press.