



Detailed Course Syllabus

Academic Year	2025. / 2026.	Semester	1.
Study Program	Nursing	Specialization/ Major in	Master's Degree
		Year of Study	1.

I. BASIC COURSE INFORMATION

Name	Tools and Communication in Science: How to Write and Publish a Master's Thesis		
Abbreviation	IZBD282	Code	280424
Status		ECTS	4
Prerequisites	none		
Total Course Workload			
Teaching Mode	Total Hours	Teaching Mode	Total Hours
Lectures	15	Seminars	15
Class Time and Place	CUC according to published timetable		

II. TEACHING STAFF

Course Holder

Name and Surname	Mate Car		
Academic Degree	PhD	Professional Title	Assistant Professor
Contact E-mail	mate.car@unicath.hr	Telephone	
Office Hours	According to published timetable Office		

Course Collaborator

Name and Surname			
Academic Degree		Professional Title	
Contact E-mail		Telephone	
Office Hours	According to published timetable Office		

Course Collaborator

Name and Surname			
Academic Degree		Professional Title	
Contact E-mail		Telephone	
Office Hours	According to published timetable Office		

III. DETAILED COURSE INFORMATION

Teaching Language	English		
Course Description	<p>Students will be introduced to a range of digital tools that support the entire process of creating and publishing research / a master's thesis, with particular emphasis on fostering reproducible workflows through markup languages like R Markdown and reference management via Zotero. They will explore the fundamental techniques of data processing and visualization in R and JASP without delving deeply into research methodology. The course also covers best practices for academic and scientific communication, including guidelines for ethically integrating AI tools into research and writing, and communicating through visualizations of data. Ultimately, students are expected to be able to produce and present a final paper that demonstrates proper references, citations, and clear presentation of results.</p>		
Expected Educational Outcomes	<p>Independently gather and organize literature using Zotero and correctly cite sources in a master's thesis. Apply basic R and JASP features for loading and simple data analyses, without detailed discussion of research methodologies. Graphically present data (different types of graphs and tables) and select the most appropriate form of visualization for a given type of result (e.g., bar charts, line charts, pie charts, box plots, scatter plots). Write and edit text in a reproducible environment (e.g., R Markdown), integrating code and outputs in a transparent, repeatable workflow. Understand and apply ethical principles in using digital tools, especially artificial intelligence (AI), to avoid plagiarism and ensure academic integrity. Prepare a complete draft of a master's thesis (without in-depth focus on research methodology), including introduction, literature review, results, graphical representations, conclusions, and reference list.</p>		
Textbooks and Materials			
Required	<p>Navarro, D., & Foxcroft, D. (2022). <i>Learning statistics with JASP: A tutorial for psychology students and other beginners.</i> (Available for free online)</p>		
Supplementary	<p>Wickham, H., & Grolemund, G. (2017). <i>R for Data Science.</i> O'Reilly. (Available for free online) Navarro, D., & Foxcroft, D. (2022). <i>Learning statistics with JASP: A tutorial for psychology students and other beginners.</i> (Available for free online) Zotero (online documentation and tutorials): https://www.zotero.org/support/ R Markdown (online documentation): https://bookdown.org/yihui/rmarkdown/ APA (2020). <i>Publication Manual of the American Psychological Association (7th ed.)</i>, or another relevant style (Vancouver), depending on the faculty's guidelines. Various articles and online resources on the ethical use of AI (e.g., guidelines for higher education).</p>		
Examination and Grading			
To Be Passed	yes	Exclusively Continuous Assessment	No
Included in Average Grade	Yes		
Prerequisites to Obtain Signature and Take Final Exam	<p>Regular attendance (at least 70% of classes) Completion of seminar assignments</p>		
Examination Manner	<p>Continuous assessment through: Teaching activities: Seminar work Final exam: Written test</p>		
Grading Manner	Grade	Percentage of Points	
	Unsatisfactory (1)	0 - 59.9%	

Satisfactory (2) 60 - 69.9%

Good (3) 70 - 79.9%

Very Good (4) 80 - 89.9%

Excellent (5) 90 - 100%

Detailed
Overview of
Grading within
ECTS

ACTIVITY TYPE	ECTS Student Workload Coefficient	GRADE PERCENTAGE (%)
Class Attendance	1	0
Seminar Presentation	0,9	30
Total in Class	1,9	30
Final Exam	2,1	70
TOTAL ECTS (Classes + Final Exam)	4	100

Midterm Exam

Dates

Final Exam

Dates

According to published timetable

IV. WEEKLY CLASS SCHEDULE

Lectures

Week	Topic
1.	Introduction to Digital Tools for Writing and Organizing Scientific Papers
2.	Zotero for Literature Management
3.	Introduction to R and RStudio
4.	JASP - A User-Friendly Approach to Data Analysis
5.	Data Visualization I: Choosing the Right Presentation
6.	Data Visualization II: Practical Examples
7.	Ethics and AI in Scientific Work
8.	Communicating Scientific Results

Seminars

Week	Topic
1.	Literature Organization with Zotero
2.	Basic R Practice
3.	Working with JASP
4.	Choosing and Creating Graphs

5.	Applying AI Tools with an Ethical Framework
6.	Reproducible Mini-Project
7.	Final Presentation