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UP SKILLS

i.	**Name of the course** Theoretical and methodological basics: Multipurpose Suffixes
ii.	**Level of the course** MA
iii.	**Workload** 5 ECTS
iv.	**Institution** University of Graz
v.	**Course instructor(s)** Boban Arsenijević

vi. Brief course description

The course introduces the student to the scientific methodology: what is a scientific question, a hypothesis, an analysis, a model, a theory, a prediction, how predictions can be tested, what happens when they are confirmed, and what when they are rejected. Discussed topics include the experimental design, continuous and discrete variables, the role of statistics, basic statistical models - fitting the models to the experiment or corpus research, as well as fitting the experiment or corpus research to the available models. All these notions are discussed on linguistic material (mostly from Slavic languages), which changes each year.

In this semester (spring 2021/22), illustrative empirical phenomena and theoretical models are sought for in the area of phonology, morphology and semantics of multipurpose suffixes: identical suffixes which occur in different environments and yield different morphological effects. The data is mainly from BKS, but other (Slavic) languages are included too (in particular Slovenian, but also Russian, as well as Hungarian, Dutch etc.).

The course begins with a theoretical introduction in the general scientific methodology, including the two Movetia courses listed below as homework, followed by one class of general overview of morphology, and two classes discussing processing signatures of grammatical and semantic relations and operations. We then begin with the readings on multipurpose suffixes - first three readings discussing various languages, and then at least three, possibly up to seven readings (depending on the pace) on multipurpose suffixes in South Slavic. Each article is first discussed for clarification and regarding its methodological setting (identifying the theoretical background, the research questions, the hypotheses, the

tests / evidence for hypotheses as given in the paper, but also potential counterevidence and inconsistencies), and then the students are encourage to come up with possible experimental designs to test the theoretical models proposed.
vii. Research related subject Morphological operations, types of morphological units
viii. Data the students work with Data obtained from corpora, data obtained from human subjects
ix. Topics

A: Research design
A1: General research design
[Teaching materials] UPSKILLS Moodle course First steps into scientific research https://upskillsproject.eu/project/scientific_research/ Movetia/ReLDI courses: https://phil.openedx.uzh.ch/courses/course-v1:PHIL+Movetia101+2046/info (in English) https://phil.openedx.uzh.ch/courses/course-v1:PHIL+ReLDI101+2018/info (in BCMS)
A2: Adapting the general research design to the specific topic of interest
The current course has a somewhat different approach. As the main topic of the course is the general research design, the course takes both directions: generalizing from the concrete research designs encountered in the course readings and from own investigations towards the more general notions, formulating concretizations of these general notions for the given article (identifying its research questions, hypotheses, predictions, tests). An additional difficulty comes from the highly theoretical nature of this year's topic, which is to be targeted by a rather empirically oriented final discussion.
A2.1: Formulation of questions and hypothesis in terms of variables
A2.2: Formulation of predictions of H0 and H1
A2.3: Selection of optimal research techniques, selection and creation of corresponding data sources • Experimental paradigms (e.g., elicitation, judgements, forced-choice) • Developing and exploiting databases and corpora (e.g. manual data annotation)
A2.4: Identifying the optimal data analysis method

A2.5: Inferring theoretical consequences from the specific data analysis results
A3: Adapting the research design to the available research infrastructures
Familiarization with the software and online platforms for the development and administration of linguistic experiments
A3.1 Selection of optimal research techniques, selection and creation of corresponding data sources (see also A2.3) • data compilation, data analysis; • understanding, selecting and performing optimal statistical tests and models
A4: Research reporting
Identifying optimal formats for the representation of the experimental insights in the processing aspects of multipurpose suffixes
A4.1 Presentation modes for research reporting (short oral presentation, report, article etc.)
A4.2 Established procedures and conventions in research reporting, such as: • the ordering of thematic units in an article/squib/report, • organization of the presentation, • amount of text and graphical items on a slide/handout, • terminology, • citing conventions
B: Infrastructures & techniques
B1: For obtaining literature
[GENERAL-PURPOSE REPOSITORY] ResearchGate, Googlescholar, Academia.edu, [DISCIPLINARY REPOSITORY] lingbuzz
B2: For obtaining, sharing and managing data
Learning to use Ibex Farm to administer experiments. Advancing the use of MSExcel-equivalent software
B2.1: Definition of research infrastructures, and the main concepts around **data interoperability**, such as **data**, **metadata** and **standards**
B2.2: Platforms and repositories
B2.3: Identifying, collecting, creating and/or using relevant data for research projects

• Searching, identifying and selecting relevant corpora from language resources platforms and repositories hosting them • Citing linguistic data sets as appropriate • Familiarity with online survey tools
B3: For analysing data
Linear Mixed Effects Model and its fitting to the data and alternative statistical tools
B3.1: Softwares for statistical tests
B3.2: Concordancers for the analysis of corpora
C: Subject-specific topics
C1: Are there multipurpose suffixes, or are they all different homophonous suffixes?
C2: If they exist, are multipurpose suffixes roots or functional items? In the former case, are other derivational suffixes roots? What about inflection?
C3: What are the processing signatures of identity, roots, homonymy?

x. Learning outcomes

A: Research design
A1: Students will be able to make an overview of the general research design.
[Teaching materials] UPSKILLS Moodle course First steps into scientific research https://upskillsproject.eu/project/scientific_research/ Movetia/ReLDI courses: https://phil.openedx.uzh.ch/courses/course-v1:PHIL+Movetia101+2046/info (in English) https://phil.openedx.uzh.ch/courses/course-v1:PHIL+ReLDI101+2018/info (in BCMS)
A2: Students will be able to create a suitable research design for the specific topic of interest.
Students will be able to summarize a theoretical linguistic article in terms of the basic methodological notions: assumptions, research questions, hypotheses, their predictions and the matching between predictions and empirical data.

Students will be able to identify potentially relevant properties of the linguistic objects under study and formalize them as variables, listing their levels exhaustively and parsimoniously. Students will be able to design appropriate experiments to test the empirical predictions of models in the intersection of morphology with phonology, i.e. with semantics.
A2.1: Students will be able to formulate questions and hypothesis in terms of variables.
A2.2: Students will be able to formulate H0 and H1.
A2.3: Students will be able to select optimal research techniques, and create corresponding data sources ● Experimental paradigms (e.g., elicitation, judgements, forced-choice, self-paced reading) ● Developing and exploiting databases and corpora (e.g., manual data annotation).
A2.4: Students will be able to select and implement the optimal data analysis method.
A2.5: Students will be able to infer theoretical consequences from the specific data analysis results.
A3: Students will be able to adapt a research design to the available research infrastructures.
Students will be familiar with one platform for the administration of linguistic experiments, Students will be able to adapt the RD to the limitations of this platform, and maximally use its features to get as precise and informative data as possible.
A3.1 Students will be able to select of optimal research techniques, select and create corresponding data sources (see also A2.3) ● data compilation, data analysis; ● understanding, selecting and performing optimal statistical tests and models.
A4: Students will be able to report on their performed research in accordance with standards and conventions in the field.
Students will be able to select the optimal format for the presentation of the critical assessment of a theory as well as of the experimental design they come up with.
A4.1 Students will be able to select and implement different presentation modes for research reporting (short oral presentation, report, article etc.).

A4.2 Students will be able to implement established procedures and conventions in research reporting, such as: • the ordering of thematic units in an article/report, • organization of the presentation, • amount of text and graphical items on a slide/handout, • terminology, • citing conventions.
B: Infrastructures & techniques
B1: Students will be able to identify and apply suitable infrastructures & techniques for obtaining literature.
[GENERAL-PURPOSE REPOSITORY] ResearchGate, Googlescholar, Academia.edu, [DISCIPLINARY REPOSITORY] lingbuzz, ROA.
B2: Students will be able to identify and apply suitable infrastructures & techniques for obtaining, sharing and managing data.
Students will be able to administer an experiment on the platform of choice (planned: Ibex Farm). Students will be able to extract data from the platform.
B2.1: Students will understand what research infrastructures are, and the main concepts around **data interoperability**, such as **data**, **metadata** and **standards**.
B2.2: Students will be able to identify suitable platforms and repositories.
B2.3: Students will be able to identify, collect, create and/or use relevant data for their research projects • Searching, identifying and selecting relevant corpora from language resources platforms and repositories hosting them • Citing linguistic data sets as appropriate. • Familiarity with online survey tools.
B3: Students will be able to identify and apply suitable infrastructures & techniques for analysing data.
Students will be able to use the linear mixed effects model.
B3.4: Students will be able to select and use concordancers for the analysis of corpora.
C: Subject-specific learning outcomes
C1: Students will be able to weigh arguments for and against the existence of multipurpose

suffixes.
C2: Students will be able to compare models of multipurpose suffixes in terms of roots and in terms of functional morphemes..
C3: Students will be able to plan an experimental investigation of multipurpose suffixes.

xi. Overview of evaluation	
Rubric	Weighing
Participation incl. homework (initiative, forward-thinking, problem solving, critical thinking, organisation, time management)	40%
Outputs based on the final research report • oral presentation • final written report	60%
xii. Reading Materials	Arsenijević, B. 2020. Deverbal nouns in -ie and their variation across the South Slavic area. Linguistica, 60(1), 7–29. https://doi.org/10.4312/linguistica.60.1.7-29 Creemers, A., Don, J. & Fenger, P. 2018. Some affixes are roots, others are heads. Nat Lang Linguist Theory 36, 45–84. https://doi.org/10.1007/s11049-017-9372-1 Kenesei, István. 2014. On a multifunctional derivational affix : Its use in relational adjectives or nominal modification and phrasal affixation in Hungarian. Word Structure, 7 (2), 214-239. Simonović, Marko. 2022. Derivational affixes as roots across categories. To appear in Journal of Slavic linguistics. Simonović, Marko and Petra Mišmaš. 2022. Lowest theme vowels or highest roots? An 'unaccusative' theme-vowel class in Slovenian. To appear in Glossa. DOI: https://doi.org/10.16995/glossa.5809