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|---|---|---|---|---|---|---|---|
| **INSTITUTION** | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | | | | | | |
| **SCHOOL** | SCHOOL OF SCIENCE | | | | | | |
| **DEPARTMENT** | INFORMATICS AND TELECOMMUNICATIONS | | | | | | |
| **COURSE LEVEL** | GRADUATE | | | | | | |
| **COURSE TITLE** | **The basics of linguistic analysis** | | | | | | |
| **COURSE CODE** | **C14** | | **Semester** | **1** | **ECTS** | **6** | |
| **TEACHING HOURS per week** | **THEORY** | **3** | **SEMINAR.** | **1** | **LABORATORY** | **1** | |
| **URL** | https://eclass.uoa.gr/courses/DI520/ | | | | | | |

| **COURSE CONTENT** |
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| The following topics are discussed: The basics of morphology. Part of Speech annotation with the Universal Dependencies (UD) tags. Basic linguistic mechanisms: agreement, long distance dependences (control, binding, anaphora), diathesis alternations, multiword expressions (MWEs). Analysis of these phenomena with constraint-based formalisms and development of toy unification-based phrase structure grammars. Syntactic annotation with UD tags (UDs do not use constraints). Semi-automatic discovery of MWEs in corpora. An introductory presentation of formal semantics (first order predicate calculus, lexical semantics). |

| **STUDENT LEARNING OBJECTIVES** |
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| Teaching Goals<br><br>• To explain a set of formal systems used in Computational Linguistics for the representation of morphological and syntactic phenomena (constrained-based formalisms and Universal Dependences)<br>• To develop computational grammars and explain the effects of ambiguity<br><br>Upon successful completion of the course the student will be able to:<br><br>• Identify, analyse and represent basic morphological and syntactic phenomena<br>• Choose among different representations of linguistic phenomena<br>• Develop phrase structure grammars<br>• Use the UD framework to annotate Greek (or other) corpora |

| **TEACHING AND LEARNING METHODS - ASSESSMENT** | |
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| **TEACHING METHOD** | In Class (Face to Face) |
| **USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES** | Learning process supported by the e-class platform (specify which specific tools you use, eg Hardware delivery, Discussions, Announcements, Task assignments, Student groups)<br>Email communication<br>Live transmission of lectures |

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|---|---|
| | Utilization of Specialised Software: LFG-Parser http://ioperm.org/lfg-parser.html, MWEToolkit http://mwetoolkit.sourceforge.net/PHITE.php |
| **TEACHING ORGANIZATION**<br>*Describe in detail the way and methods of teaching:*<br>*Enhanced Lectures,*<br>*Online Lectures,*<br>*Seminars,*<br>*Tutorial,*<br>*Laboratory,*<br>*Laboratory Exercise,*<br>*Study & analysis of literature,*<br>*Practice (Positioning),*<br>*Interactive teaching,*<br>*Developing a project,*<br>*Individual / group work*<br>*Telework (reference to tools) etc.*<br><br>*Details of the student's study hours for each learning activity and hours of non-guided study are shown to ensure that the total workload at the semester corresponds to the ECTS* | <table><tr><th>Activity</th><th>Student Workload (hours)</th></tr><tr><td>Lectures</td><td>39</td></tr><tr><td>Tutorial</td><td>13</td></tr><tr><td>Laboratory</td><td>13</td></tr><tr><td>Teamwork in a case study</td><td>30</td></tr><tr><td>Small individual exercises</td><td>10</td></tr><tr><td>Independent Study</td><td>45</td></tr><tr><td>……..</td><td>…</td></tr><tr><td>Total Course (25 hours of workload per unit of credit)</td><td>150</td></tr></table> |
| **ASSESSMENT OF STUDENTS**<br>*Description of the assessment process*<br><br>*Assessment Methods, Formative or Concluding, Multiple Choice Test, Quick Response Questions, Test Development Questions, Problem Solving, Written Work, Report / Report, Oral Examination, Public Presentation, Laboratory Work, Other / Other*<br><br>*Fully defined evaluation criteria are mentioned and if and where they are accessible to students.* | Describe explicitly methods, evaluation tools and provided feedback.<br>The table below is supplemented accordingly.<br><table><tr><th>Assessment methods</th><th>Number</th><th>Percentage</th></tr><tr><td>Written examination</td><td>1</td><td>50%</td></tr><tr><td>Progress</td><td>2</td><td>20%</td></tr><tr><td>Exercises</td><td>3</td><td>10%</td></tr><tr><td>Laboratory</td><td>5</td><td>10%</td></tr><tr><td>Final work</td><td>1</td><td>10%</td></tr></table> |

**LITERATURE AND STUDY MATERIALS / READING LIST**

**BIBLIOGRAPHY (IN ENGLISH)**


Andrews, Avery D. 2007. The major functions of the noun phrase. In Timothy Shopen (Ed.), *Language Typology and Syntactic Description* (pp. 132-223). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511619427.003

Asudeh, Ash & Toivonen, Ida. 2009. Lexical-Functional Grammar. In Bernd Heine and Heiko Narrog, (Ed.) *The Oxford Handbook of Linguistic Analysis.* Oxford: Oxford University Press. http://users.ox.ac.uk/~cpgl0036/pdf/asudeh-toivonen09-lfg-ohla.pDF

Bender, Emily M. 2013. *Linguistic Fundamentals for Natural Language Processing: 100 Essentials from Morphology and Syntax*. Synthesis Lectures on Human Language Technologies #20. Morgan & Claypool Publishers. http://libgen.rs/search.php?req=Linguistic%20fundamentals%20for%20&lg_topic=libgen&open=0&view=simple&res=25&phrase=1&column=title&fbclid=IwAR3ADhTlzy_cLeMn-HxCeX6FQf3jhhssbWY-PJlHpdaaRlbP3LFE-7sBg4g

Jurafsky, Dan and James H. Martin. 2020. *Speech and Language Processing* https://web.stanford.edu/~jurafsky/slp3/

Levin, Beth. 1993. *English Verb Class and Alternations: A Preliminary Investigation.* Chicago. University of Chicago Press.

Osborne, Timothy and Kim Gerdes. 2019. The status of function words in dependency grammar: A critique of Universal Dependencies (UD). *Glossa: a journal of general linguistics 4(1)*: 17. 1–28, DOI: https://doi.org/10.5334/gjgl.537

Przepiorkowski, Adam and Agnieszka Patejuk. 2018. Arguments and Adjuncts in Universal Dependencies. *Proceedings of the 27th International Conference on Computational Linguistics*, Santa Fe, New Mexico, USA, pp. 3837—3852, https://www.aclweb.org/anthology/C18-1324

**WEB RESOURCES**

ILSP NLP Web Services http://nlp.ilsp.gr/soaplab2-axis/

Online glossary of linguistics terminology: Greek-English & English-Greek
http://users.uoi.gr/gjxydo/lexicon/glossary.html

The Parole Tagset with examples http://nlp.ilsp.gr/nlp/tagset_examples/tagset_en/index.html

Universal Dependencies https://universaldependencies.org/u/overview/tokenization.html