INSTITUTION	NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS					
SCHOOL	SCHOOL OF SCIENCE					
DEPARTMENT	INFORMATICS AND TELECOMMUNICATIONS					
COURSE LEVEL	GRADUATE					
COURSE TITLE	**Language Processing**					
COURSE CODE	**C16**		**Semester**	**3**	**ECTS**	**6**
TEACHING HOURS per week	**THEORY**	**3**	**SEMINAR.**		**LABORATORY**	
URL						

COURSE CONTENT

Short description

The course focuses on the mechanisms of language processing in production and comprehension from a psycholinguistic point of view. More specifically, the theoretical part of the course will focus on: a) the mechanisms of lexical retrieval and the variables that affect the speed of retrieval, b) the morphological decomposition of complex words, c) the syntactic processing of sentences of graded structural complexity, d) the production and comprehension of discourse, e) auditory processing, and f) semantic and pragmatic processing of written text. The practical part of the course will introduce students to up to date experimental language processing techniques, including eye tracking, online responses to a variety of language stimuli in real-time (E-prime, PsychoPy software), discourse data collection (e.g., through narrative elicitation tasks), and processing (transcription and annotation) with annotation tools for audio and video recordings (e.g., ELAN). The experimental data will be drawn from both monolingual and bilingual children of neurotypical development and from monolingual and bilingual children with neurodevelopmental disorders (Developmental Language Disorder, Autism Spectrum Disorder), as well as from adults with speech and language impairments, such as aphasia.

Course organization

1st lecture: Models of language production and comprehension, Basic models of language processing.

2nd lecture: Mechanisms of lexical retrieval, Models of decomposition of morphologically complex words.

3rd lecture: Mechanisms of syntactic processing, Effect of structural complexity on syntactic processing, Structural ambiguity resolution (*garden path effect*), The phenomenon of anaphora.

4th lecture: Mechanisms of semantic processing of discourse, Effects of vocabulary-syntax-explicit/implicit prosody on discourse processing, Mechanisms of inferencing in text comprehension.

5th lecture: Experimental studies on lexical retrieval and morphological decomposition of complex words designed with PsychPy and E-prime software.

6th lecture: Experimental studies on sentence processing designed with E-Prime software.

7th lecture: Experimental studies on anaphora processing designed with eye tracking methodology.

8th and 9th lecture: Experimental studies using narrative elicitation and story retelling, Models of Microstructural and Macrostructural analysis of narrative discourse.

10th lecture: Collection, transcription and annotation of experimental data from discourse productions (monolingual children of neurotypical development) using the ELAN software.

11th lecture: Collection, transcription, annotation and processing of oral discourse productions, elicited from adults with neurogenic speech and language disorders (aphasia).

12th-13th lecture: Critical literature review (Oral presentations)

STUDENT LEARNING OBJECTIVES

This course aims to:
• Introduce students to current theories of language processing (lexical, morphological, syntactic and discourse processing)
• Introduce students to up to date experimental research methods used in psycholinguistics

Upon successful completion of the course the student will be able to:

- Demonstrate critical knowledge and understanding of key psycholinguistic concepts.
- Distinguish between the two basic processes involved in language processing, namely production and comprehension.
- Demonstrate critical knowledge about research methods used in psycholinguistics.
- Show systematic understanding of mechanisms of lexical, morphological, syntactic and discourse processing.
- Demonstrate knowledge of the way the different language levels interact during language processing (*language interfaces*)
- Demonstrate experimental research skills in language processing by undertaking independent research experiments, analyzing, interpreting, and discussing their findings.

TEACHING AND LEARNING METHODS – ASSESSMENT	
TEACHING METHOD	Video conferencing
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	e-class platform (Discussions, Announcements, Task assignments, Student groups) Email communication Specialized Software: Eye tracking software (e.g. Tobii Pro Studio), E-prime, PsychoPy, ELAN
TEACHING ORGANIZATION *Describe in detail the way and methods of teaching:* *Enhanced Lectures,* *Online Lectures,* *Seminars,* *Tutorial,* *Laboratory,* *Laboratory Exercise,* *Study & analysis of literature,* *Practice (Positioning),* *Interactive teaching,* *Developing a project,* *Individual / group work* *Telework (reference to tools) etc.* *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>Individual exercises</td><td>21</td></tr><tr><td>Critical literature review</td><td>30</td></tr><tr><td>Independent Study</td><td>60</td></tr><tr><td>Total Course (25 hours of workload per unit of credit)</td><td>150</td></tr></table>

ASSESSMENT OF STUDENTS	
ASSESSMENT OF STUDENTS *Description of the assessment process* *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* *Fully defined evaluation criteria are mentioned and if and where they are accessible to students.*	Critical literature review is evaluated in the context of an oral presentation of a scientific publication in groups of 2-3 people. Exercises are individual.

Assessment methods	Number	Percentage
Exercises	3	20%
Critical literature review	1	30%
Final work	1	50%

LITERATURE AND STUDY MATERIALS / READING LIST

1. Altman, C., Armon-Lotem, S., Fichman, S., & Walters, J. (2016). Macrostructure, microstructure, and mental state terms in the narratives of English–Hebrew bilingual preschool children with and without specific language impairment. *Applied Psycholinguistics*, *37*(1), 165-193.
2. Andreou, M., & Peristeri, E. (2021). Interference Resolution in Nonfluent Variant Primary Progressive Aphasia: Evidence From a Picture–Word Interference Task. *Cognitive and Behavioral Neurology*, *34*(1), 11-25.
3. Arnold, J. E, Eisenband, J. G., Brown-Schmidt, S., & Trueswell, J. C. (2000). The rapid use of gender information: evidence of the time course of pronoun resolution from eyetracking. *Cognition*, *76*(1), B13-B26.
4. Harley, T. A. (2014). The Psychology of Language: From Data to Theory (4th ed.). London: Psychology Press.
5. Papadopoulou, D., Peristeri, E., Plemenou, E., Marinis, T., & Tsimpli, I.M. (2015). Pronoun Ambiguity Resolution in Greek: Evidence from monolingual adults and children. *Lingua*, *155*, 98-120. DOI: https://doi.org/10.1016/j.lingua.2014.09.006
6. Papadopoulou, D., Tsimpli, I. M., & Amvrazis, N. (2013). Research Methods in Second Language Psycholinguistics. In J. Jegerski & B. VanPatten (Eds.), *Self-paced listening* (pp. 51-69). New York: Routledge.
7. Peristeri, E., Baldimtsi, E., Andreou, M., & M., Tsimpli, I. M. (2020). The Impact of Bilingualism on the Narrative Ability and the Executive Functions of Children with Autism Spectrum Disorders. *Journal of Communication Disorders*. DOI: https://doi.org/10.1016/j.jcomdis.2020.105999
8. Peristeri, E., Baldimtsi, E., Vogelzang, M., Tsimpli, I. M., & Durrleman, S. (2021). The cognitive benefits of bilingualism in Autism Spectrum Disorder: Is Theory of Mind boosted and by which underlying factors? *Autism Research*. doi: 10.1002/aur.2542. Epub ahead of print. PMID: 34008896.
9. Tsapkini, K., Peristeri, E., & Tsimpli, I. M., & Jarema, G. (2014). Morphological decomposition in Broca's aphasia. *Aphasiology*, *28* (3), 296-319.
10. Weber, A., Grice, M., & Crocker. M. W. (2006). The role of prosody in the interpretation of structural ambiguities: A study of anticipatory eye movements. *Cognition*, *99*(2), B63-B72.