Biological Bases of Language

Code: 100275
ECTS Credits: 6

Degree	Type	Year	Semester
2500245 English Studies	OT	3	0
2500245 English Studies	OT	4	0
2503998 Catalan Philology: Literary Studies and Linguistics	OT	4	2
2504211 Spanish Language and Literature	OT	3	2
2504211 Spanish Language and Literature	OT	4	2
2504212 English Studies	OT	3	2
2504212 English Studies	OT	4	2
2504235 Science, Technology and Humanities	OT	4	2
2504380 English and Catalan Studies	OT	0	0
2504380 English and Catalan Studies	OT	3	0
2504380 English and Catalan Studies	OT	4	0
2504386 English and Spanish Studies	OT	3	2
2504386 English and Spanish Studies	OT	4	2
2504388 Catalan and Spanish Studies	OT	0	0
2504388 Catalan and Spanish Studies	OT	3	0
2504388 Catalan and Spanish Studies	OT	4	0
2504393 English and French Studies	OT	0	0
2504393 English and French Studies	OT	3	0
2504393 English and French Studies	OT	4	0
2504394 English and Classics Studies	OT	3	2
2504394 English and Classics Studies	OT	4	2

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Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

Prerequisites

No specific requirements are needed to follow the course beyond some elementary notions of linguistics. It is nonetheless advisable to be able to read scientific texts in English.

Objectives and Contextualisation

This course is presented as an introduction to the principles and methods of the biolinguistic approach in the language sciences. This approach proposes a view of language understood as a natural object, as one of the characters of the human species and, therefore, one that may be studied applying the very same principles and methods one uses when studying, for example, its anatomy. The approach thereby implies asking such questions as what are the basic neural structures underlying human linguistic capacities and how they work, what is their evolutionary history and how they develop in the individual. The main goal of the course is, therefore, to offer students some of the basic theoretical tools for them to be able to understand and assimilate some of the major achievements in this interdisciplinary area, such that they may pursue their research in the camp, if so they wish.

Competences

English Studies
- Develop critical thinking and reasoning and knowing how to communicate effectively both in your mother tongue and in other languages.
- Identifying the linguistic types behind the linguistic diversity and establishing generalisations and universal principles.
- Recognising and using reasonably the principles, methods and results of the structural analysis of languages, foundations of the linguistic theory and approaches of the study of language and communication as a complex, emerging and dynamic phenomenon.
- Relating the methods and results of linguistics with those from other sciences and currents of though and interpreting the overlapping of language with other aspects of the human activity.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Understanding the biological, cognitive and cultural foundations of human language and the main contemporary grammatical models.

Catalan Philology: Literary Studies and Linguistics
- Critically apply the different instruments of analysis to different types of linguistic data.
- Critically read and interpret texts.
- Demonstrate a mastery of the rules of the Catalan language, its linguistic bases and all its application in the academic and professional fields.
- Display teamwork skills.
- Identify the foundations of human language and the principles, methods and results of structural analysis of languages.
- Produce written work and oral presentations that are effective and framed in the appropriate register.

- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.

Spanish Language and Literature
- Carry out effective written work or oral presentations adapted to the appropriate register in different languages.
- Demonstrate the ability to work autonomously and in teams in order to achieve the planned objectives in multicultural and interdisciplinary contexts.
- Develop arguments applicable to the fields of Hispanic literature, literary theory, Spanish language and linguistics, and evaluate their academic relevance.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Typologically identify the main phenomena of the Spanish language and relate them to similar phenomena in other languages.

English Studies
- Critically evaluate linguistic, literary and cultural production in English.
- Describe and analysesynchronically and comparativelythe main phonetic, phonological, morphological, syntactic, semantic and pragmatic properties of English and its historical development.
- Develop arguments applicable to the fields of literature, culture and linguistics and evaluate their academic relevance.
- Distinguish and contrast the distinct paradigms and methodologies applied to the study of English.
- Produce effective written work or oral presentations adapted to the appropriate register in distinct languages (except English).
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

Science, Technology and Humanities
- Display a capacity for organisation and planning and, at the same time, for adapting to new problems or situations.
- Explain human cognition and intelligence on the basis of the construction of symbolic languages and systems.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Work collaboratively in teams.

English and Catalan Studies
- Carry out effective written work or oral presentations adapted to the appropriate register in different languages.
- Critically apply the different instruments of analysis to different types of linguistic data.
- Demonstrate the ability to work autonomously and in teams with the aim of attaining the planned objectives in multicultural and interdisciplinary contexts.
- Identify the foundations of human language and the principles, methods and results of structural analysis of languages.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

English and Spanish Studies

- Carry out effective written work or oral presentations adapted to the appropriate register in different languages.
- Demonstrate the ability to work autonomously and in teams in order to achieve the planned objectives in multicultural and interdisciplinary contexts.
- Identify the foundations of human language and the principles, methods and results of structural analysis of languages.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

Catalan and Spanish Studies
- Carry out effective written work or oral presentations adapted to the appropriate register in different languages.
- Critically apply different analytical instruments to different types of linguistic data, whether in synchronic or diachronic.
- Demonstrate the ability to work autonomously and in teams with the aim of attaining the planned objectives in multicultural and interdisciplinary contexts.
- Identify the foundations of human language and the principles, methods and results of structural analysis of languages.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

English and French Studies
- Carry out effective written work or oral presentations adapted to the appropriate register in different languages.
- Demonstrate the ability to work autonomously and in teams with the aim of attaining the planned objectives in multicultural and interdisciplinary contexts.
- Identify the foundations of human language and the principles, methods and results of structural analysis of languages.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

English and Classics Studies
- Demonstrate the ability to work autonomously and in teams in order to achieve the planned objectives in multicultural and interdisciplinary contexts.
- Identify the foundations of human language, the principles, methods and results of the structural analysis of languages.
- Produce effective written work or oral presentations adapted to the appropriate register in distinct languages.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

Learning Outcomes

1. Accurately drawing up normative texts.
2. Analyse different types of linguistic data.
3. Analyse various types of linguistic data.

4. Analysing various types of linguistic data.
5. Apply findings presented in specialist papers to the analysis of similar or related phenomena.
6. Applying the results presented in specialised articles to the analysis of similar or related phenomena.
7. Approach language through specific methods for requesting and using linguistic data.
8. Appropriately use the different available formal and technical resources.
9. Construct normatively correct texts.
10. Create an organised and correct discourse, spoken and in writing, in the corresponding language.
11. Develop an organized and correct oral and written speech, in the corresponding language.
12. Drawing up brief original works about these topics.
13. Establish typological generalisations.
14. Establish typological generalizations.
15. Establishing typological generalizations.
16. Evaluate the problems posed by the study of language and cognition based on the methods and concepts of philosophy, linguistics, cognitive science and other disciplines.
17. Gain familiarity with the different programmes of naturalistic study of the mind and their functioning.
18. Identify and evaluate the importance of the human factor in the development and use of symbolic systems.
19. Identify different theoretical options or ways of approaching the same problems from alternative theoretical frameworks.
20. Identify different theoretical options or ways to address the same problems from alternative theoretical frameworks.
21. Identify formally correct and incorrect arguments by translating natural language utterances to formal language, and applying first-order logic to make demonstrations and deductions.
22. Identify main and secondary ideas and express them with linguistic correctness.
23. Identify principal and secondary ideas and express them using correct language.
24. Identify the main and secondary ideas and express them with linguistic correctness.
25. Identifying different theoretical options or ways of dealing with the same problem from alternative theoretical frameworks.
26. Identifying main and supporting ideas and expressing them with linguistic correctness.
27. Identifying the main and secondary ideas and expressing them with linguistic correctness.
28. Integrate elements from different areas of knowledge to analyse a situation and suggest actions or solutions.
29. Interpret these methods on the basis of sociolinguistic models.
30. Interpreting the mentioned methods on the basis of sociolinguistic models.
31. Know the structure and evolution of the faculty of language, and the interactions between language and cognition.
32. Make an informed judgement on the social and ethical challenges posed by artificial intelligence.
33. Managing the different data collection, processing and analysis techniques in a manner that is consistent with the objective of the study.
34. Plan, organise and carry out teamwork.
35. Plan, organise and carry out work in a team.
36. Planificar, organizar y realizar trabajos en equipo.
37. Preparing an oral and written discourse in the corresponding language in a proper and organized way.
38. Produce creative papers and personal projects in the corresponding area of study.
39. Produce normatively correct written and oral texts.
40. Programme simple algorithms and appreciate the logic of their functioning.
41. Promote team spirit and the integration of others' points of view.
42. Recognising different processing systems of the natural language according to their possible applications and development principles.
43. Resolving problems independently.
44. Solve complex linguistic analysis at any level and with the appropriate tools.
45. Solve complex problems of linguistic analysis at any level and using the appropriate tools.
46. Solve complex problems of linguistic analysis at any level and with the appropriate instruments.
47. Solve problems autonomously.
48. Solve problems of grammatical analysis.
49. Solve problems self-sufficiently.
50. Solving complex problems of linguistic analysis in any level with the appropriate tools.
51. Solving problems autonomously.

52. Solving problems of grammatical analysis.
53. Summarise the knowledge acquired about the origin of the various fields within the discipline and the transformations they have undergone.
54. Summarising acquired knowledge about the origin and transformations experienced in its several fields of study.
55. Synthesise the knowledge acquired on the origin and transformations undergone by the different fields of study of the discipline.
56. Understand the concepts of numbering system, algorithm and computability, and appreciate their historical and practical importance.
57. Understand the notion of computability, and the concept of programme stored on a computer, as a set of instructions for executing an algorithm, and identify the difference between a machine with a fixed programme and a self-programmable machine.
58. Use and interpret texts of an interdisciplinary nature on the connections between linguistics and other disciplines.
59. Use and interpret texts of interdisciplinary nature about the connections between linguistics and other disciplines.
60. Use basic methods for compiling and processing linguistic data.
61. Use the appropriate and specific terminology of the literary studies.
62. Using the basic linguistic methods of data compilation and treatment.
63. Write brief original texts on these topics.
64. Write short original papers on topics related to linguistics.
65. Write text commentaries from a critical standpoint.

Content

1.- Introduction. Methodological problems in the study of language and cognition from the biological perspective.

2.- Evolutionary biology: A brief historical introduction from Darwin till today.

3.- The form/function problem in biology and its translation to the field of language and cognition.

4.- Evolutionary developmental biology: The role of the organism in biological explanations and the evolution of language.

5.- Developmental ecology: The role of the environment in biological explanations and the acquisition of language.

Methodology

The course combines three types of activities: theoretical sessions in charge of the teacher, oral presentations about specific topics in charge of the students, and individualized work. The latter two coform the basis for the final assessment of the course. The idea is that the teacher will set the bases for each of the subjects and, thereafter, that the students present orally some of these fundamental questions in class in order to foster debate.

The calendar will be available on the first day of class. All the relevant information will be made available through Moodle: the description of the activities, teaching materials, and any necessary information for the proper follow-up of the subject. In case of a change of teaching modality for health reasons, teachers will make readjustments in the schedule and methodologies.

Once the teaching assessment polls have been made public, 15 minutes of one of the face-to-face sessions will be reserved for students to be able to answer them.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical sessions	45	1.8	
Type: Supervised			
Oral presentations	30	1.2	4, 1, 27, 25, 12, 51, 54, 62
Type: Autonomous			
Preparing the oral presentation and writing the review essay	75	3	4, 1, 27, 25, 12, 51, 54, 62

Assessment

Students will be required to prepare an oral presentation. This presentation shall be based on one of the chapters of the course's handbook (see bibliography). The teacher will base his assessment on the oral presentation and the student's participation in class. This activity represents a 10% of the final qualification. Also, as an individual activity connected with the theoretical aspects of the handbook, each student will be required to deliver a written test. This test represents a 50% of the final qualification. Additionally, students should write a review essay of the course handbook. This activity will represent a 40% of the final qualification. All activities will be marked on a scale from 0 to 10 and, afterwards, a final mean will be calculated. A PASS grade is obtained with a mark greater than or equal to 5. In the event that tests or exams cannot be taken onsite, they will be adapted to an online format made available through the UAB's virtual tools (original weighting will be maintained). Homework, activities and class participation will be carried out through forums, wikis and/or discussion on Teams, etc. Lecturers will ensure that students areable to access these virtual tools, or will offer them feasible alternatives.

Not Assessed: Students will obtain a Not assessed/Not submitted course grade unless they have submitted more than 30% of the assessment items.

Resitting: The condition for being able to have access to resitting is having obtained a global mark above 3.5 and below 5: This figure must be derived from the assessment of activities representing at least two thirds of the global assessment of the subject. Given that the presentation is not eligible for reassessment, resitting will consist in delivering a summary of one of the five subjects of the course PLUS delivering the review or a refurbished version thereof. In any case, the maximum degree that will be awarded in the resitting round will be 5.

Revision procedure: At the time of carrying out any of the evaluation activities the teacher will make public through Moodle the dates and procedures for the revision of said activities.

Plagiarism: In the event of a student committing any irregularity that may lead to a significant variation in the grade awarded to an assessment activity, the student will be given a zero for this activity, regardless of any disciplinary process that may take place. In the event of several irregularities in assessment activities of the same subject, the student will be given a zero as the final grade for this subject.

Non-continuous assessment: Those students opting for non-continuous assessment must deliver the following three activities: 1.- A vídeo recording of an oral presentation of one of the chapters of the course's handbook (50% of the final grade); 2.- A written commentary of the contents of the chapter presented in activity 1 (10% of

the final grade); 3.- A review essay of the course handbook (40% of the final grade). As for reassessment, the same principles and methods as for ordinary assessment will be applied.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral presentation	10%	0	0	4, 5, 1, 9, 59, 58, 27, 23, 20, 19, 25, 35, 39, 12, 51, 49, 47, 43, 54, 53, 55, 62, 60
Review essay	40%	0	0	4, 5, 6, 1, 9, 38, 59, 58, 27, 23, 20, 19, 25, 39, 12, 65, 63, 51, 49, 47, 43, 54, 53, 55, 62
Theoretical test	50%	0	0	4, 2, 3, 6, 5, 7, 16, 56, 57, 1, 9, 31, 38, 37, 11, 10, 15, 13, 14, 17, 8, 59, 58, 33, 41, 21, 18, 27, 23, 22, 26, 24, 20, 19, 25, 28, 29, 30, 35, 34, 36, 39, 40, 42, 12, 65, 63, 64, 44, 46, 50, 45, 52, 48, 51, 49, 47, 43, 54, 53, 55, 32, 62, 60, 61

Bibliography

Course handbook:

Benítez Burraco A. & L. Barceló Coblijn. 2015. El origen del lenguaje. Madrid: Síntesis.

Some suggested readings:

Arthur, W. 2011. Evolution. A Developmental Approach. Oxford: Wiley-Blackwell.

Balari, S & G. Lorenzo. 2013. Computational Phenotypes. Towards an Evolutionary Developmental Biolinguistics. Oxford: Oxford University Press.

Benítez Burraco, A. 2023. El origen del lenguaje: De Adán a Babel. Córdoba: Almuzara.

Berwick, R. C. & N. Chomsky. 2016. Why Only Us. Language and Evolution. Cambridge, MA: The MIT Press

Boeckx, C. & K.K. Grohmann, eds. 2013. The Cambridge Handbook of Biolinguistics. Cambridge: Cambridge University Press.

Boeckx, C., M.C. Horno-Chéliz & J.-L. Mendívil-Giró, eds. 2012. Language, from a Biological Point of View. Newcastle upon Tyne: Cambridge Scholars Publishing.

Garcia-Fernàndez, J. & D. Bueno. 2016. L'embrió inconformista. Com influeix en la nostra evolució el desenvolupament embrionari. Barcelona: Edicions Universitat de Barcelona.

Lorenzo, Guillermo. 2013. Biolingüística. La nueva síntesis. Accessible en línia amb llicència Creative Commons a http://www.unioviedo.es/biolang/la-nueva-sintesis/

Minelli, A. 2007. Forme del Divenire. Torino: Einaudi (Traducció anglesa: Forms of Becoming. Princeton: Princeton University Press, 2009).

Striedter, G.F. 2005. Principles of Brain Evolution. Sunderland, MA: Sinauer.

In the Web:

The online journal Biolinguistics: https://bioling.psychopen.eu/index.php/bioling. Free Access.

The website of the Evolution of Language International Conferences: https://www.evolang.org. All conference proceedings to date are freely available.

Several publications of the Frontiers group, www.frontiers.org, accessible free and dealing with several topics of interest for the course.

Software

Este campo está vacío.