

**Biological Bases of Language**

Code: 100275  
 ECTS Credits: 6

Degree	Type	Year	Semester
2500243 Classics	OT	3	0
2500243 Classics	OT	4	0
2500245 English Studies	OT	3	0
2500245 English Studies	OT	4	0
2500247 Catalan Language and Literature	OT	3	0
2500247 Catalan Language and Literature	OT	4	0
2500248 Spanish Language and Literature	OT	3	0
2500248 Spanish Language and Literature	OT	4	0
2501801 Catalan and Spanish	OT	3	0
2501801 Catalan and Spanish	OT	4	0
2501902 English and Catalan	OT	3	0
2501902 English and Catalan	OT	4	0
2501907 English and Classics	OT	3	0
2501907 English and Classics	OT	4	0
2501910 English and Spanish	OT	3	0
2501910 English and Spanish	OT	4	0
2501913 English and French	OT	3	0
2501913 English and French	OT	4	0

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**Use of Languages**

Principal working language: catalan (cat)  
 Some groups entirely in English: No  
 Some groups entirely in Catalan: Yes  
 Some groups entirely in Spanish: No

**Prerequisites**

No specific requirements are needed to follow the course beyond some elementary notions of linguistics. It is advisable, however, 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 to view 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

### Classics

- Developing critical thinking and reasoning and communicating them effectively both in your own and 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 thought and interpreting the overlapping of language with other aspects of the human activity.
- 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 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 structures.

### 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 thought 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 Language and Literature

- Developing critical thinking and reasoning and communicating them effectively both in your own and 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 schools of thought and interpreting the overlapping of the language with other aspects of the human activity.
- 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 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 structures.

#### Spanish Language and Literature

- Developing critical thinking and reasoning and communicating them effectively both in your own and 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 thought and interpreting the overlapping of language with other aspects of the human activity.
- 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.
- Understanding the biological, cognitive, and cultural foundations of human language and the main contemporary grammatical structures.

#### Catalan and Spanish

- 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 thought 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.

#### English and Catalan

- 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 thought 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.

#### English and Classics

- 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.
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- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
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#### English and Spanish

- 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.
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- 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.

#### English and French

- 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 thought 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.

## Learning Outcomes

1. Accurately drawing up normative texts.
2. Analysing various types of linguistic data.
3. Drawing up brief original works about these topics.
4. Identify different theoretical options or ways of dealing with the same problem from alternative theoretical frameworks.
5. Identify main ideas and express them with secondary and linguistic correctness
6. Identify the main and secondary ideas and express them with linguistic correctness.
7. Identifying different theoretical options or ways of dealing with the same problem from alternative theoretical frameworks.
8. Identifying main and supporting ideas and expressing them with linguistic correctness.
9. Identifying the main and secondary ideas and expressing them with linguistic correctness.
10. Preparing an oral and written discourse in the corresponding language in a proper and organized way.
11. Solve problems autonomously.
12. Solve problems of grammatical analysis.
13. Solving problems autonomously.
14. Solving problems of grammatical analysis.
15. Summarising acquired knowledge about the origin and transformations experienced in its several fields of study.
16. Use and interpret texts of interdisciplinary nature about the connections between linguistics and other disciplines.
17. Use the appropriate and specific terminology of the literary studies.
18. Using the basic linguistic methods of data compilation and treatment.

## 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 conform 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.

## Activities

Title	Hours	ECTS	Learning Outcomes
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Type: Directed

Theoretical sessions	75	3	2, 18, 7, 14, 15
Type: Supervised			
Oral presentations	50	2	2, 1, 10, 18, 16, 5, 9, 8, 6, 7, 4, 3, 14, 12, 13, 11, 15, 17
Type: Autonomous			
Review essay	25	1	2, 1, 10, 18, 16, 5, 9, 8, 6, 7, 4, 3, 14, 12, 13, 11, 15, 17

## Assessment

Depending on the total amount of students in class, these will be required to prepare, individually or in group, 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 written materials delivered by the students. This activity represents a 50% of the final qualification. Also, as an individual activity connected with the theoretical sessions, each student will be required to compose a brief summary of one of the five subjects of the course on the basis of the materials made available through Moodle. This summary, which must be delivered at the end of the course, represents a 20% of the final qualification. Additionally, students should write a review essay of the course handbook. In this case, the activity will also be individually carried out and will represent a 30% of the final qualification. All activities will be marked on a scale from 0 to 10 and, afterwards, a final mean will be calculated.

No Avaluable: Those students not delivering all three evidences will get the qualification of No Avaluable.

Re-evaluation: The condition for being able to have access to re-evaluation is having obtained a global mark above 3.5 and below 5. Given that the presentation is not eligible for reassessment, re-evaluation will consist in delivering a new summary of one of the five subjects of the course DIFFERENT from the one delivered for ordinary evaluation, and in delivering the review or a refurbished version thereof. In any case, the maximum degree that will be awarded in the re-evaluation 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.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral presentation	50%	0	0	2, 1, 10, 18, 16, 5, 9, 8, 6, 7, 4, 3, 14, 12, 13, 11, 15, 17
Review essay	30%	0	0	2, 1, 10, 18, 16, 5, 9, 8, 6, 7, 4, 3, 14, 12, 13, 11, 15, 17
Summary	20%	0	0	2, 1, 10, 18, 16, 5, 9, 8, 6, 7, 4, 3, 14, 12, 13, 11, 15, 17

## Bibliography

Course handbook:

Lorenzo, Guillermo. 2013. Biolingüística. La nueva síntesis. Accessible online under Creative Commons at <http://www.unioviedo.es/biolang/la-nueva-sintesis/>

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.

Berwick, R. C. & N. Chomsky. 2015. 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.

Minelli, A. 2007. *Forme del Divenire*. Torino: Einaudi (English translation: *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: [www.biolinguistics.eu](http://www.biolinguistics.eu). Free Access.

Several publications of the Frontiers group, [www.frontiers.org](http://www.frontiers.org), accessible free and dealing with several topics of interest for the course.