

Human Origins

Code: 100749
ECTS Credits: 3

Degree	Type	Year	Semester
2500250 Biology	OT	4	1
2504235 Science, Technology and Humanities	OT	4	1

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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

Other comments on languages

Articles to be read will be in English

Prerequisites

There are no prerequisites to follow the course successfully

Objectives and Contextualisation

The main objective of the subject of human origins is to understand current human groups based on their evolution over time.

The study of the evolution of man is made from an integrative perspective of various disciplines. The entire process can not be understood without understanding the periodization and therefore the dating methods for each moment; The changes can not be understood without understanding the evolution of the Earth and how it limits the environment, as climate changes modify ecosystems; tool manufacturing and brain development ...

In this whole, we can understand the evolution from the first primates to the variability of the current man.

Throughout this process, we can understand the evolution of diseases and their distribution in the biosphere.

And the molecular study of the different hominins will capture the variability of the current man.

Competences

- Biology
- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Analyse and interpret the origin, evolution, diversity and behaviour of living beings.
- Assess environmental impacts.
- Be able to analyse and synthesise
- Be able to organise and plan.

- Characterise, manage, conserve and restore populations, communities and ecosystems.
- Control processes and provide services related to biology.
- Design and carry out biodiagnoses and identify and use bioindicators.
- Develop a historical vision of biology.
- Isolate, identify and analyse material of biological origin.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Perform genetic analyses.
- 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 be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Science, Technology and Humanities

- Produce written papers and give effective oral presentations, adopting the appropriate register in different languages.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Analyse present and past intra-population and inter-population variability in our species.
3. Analyse the sex- or gender-based inequalities and the gender biases present in one's own area of knowledge.
4. Analyse the sustainability indicators of the academic and professional activities within the area, integrating the social, economic and environmental dimensions.
5. Assess environmental impacts.
6. Be able to analyse and synthesise.
7. Be able to organise and plan.
8. Critically analyse the principles, values and procedures that govern the exercise of the profession.
9. Define the role of the primates in the identification of disease-causing agents.
10. Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
11. Explain the historical precedents that justify the study of the human being as a separate subject area.
12. Explain the underlying biological causes of human social behaviour.
13. Identify the principal natural factors that have intervened in the distribution of human populations.
14. Interact with and advise government institutions operating in the field of social policy and population and public health policy.
15. Interpret human variability as a source of individualisation.
16. Interpret phylogeographic analyses of the human species.
17. Interpret the evolutionary dimension of hominids and their evolution in space and in time.
18. Interrelate the environmental, biological and cultural data that merge in the interpretation of human evolution.
19. Make population genetic determinations from which to interpret the relationships between normal and pathological variability in the human species, and interpret the findings.
20. Manipulate human samples and perform morphological, molecular and chromosome determinations for the diagnosis and prevention of diseases.
21. Propose new methods or well-founded alternative solutions.

22. Propose projects and actions that incorporate the gender perspective.
23. Propose ways to evaluate projects and actions for improving sustainability.
24. Select and classify museum samples and recover data from archives and registries.
25. 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.
26. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
27. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
28. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
29. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
30. Summarise and interpret the biology, evolution and behaviour of the order Primates.
31. Work in teams.

Content

- T. 1. Systematics: morphological and molecular
- T. 2. Dating methods
- T. 3. Reconstructing behavior
- T. 4. The origin
- T. 5. Miocene period
- T. 6.- Colonization of the savannah
- T. 7.- Routes of Asian SE
- T. 8.- Homo in Asia
- T. 9.- Homo in Europe
- T. 10. Neandertals
- T. 11. Early Homo sapiens
- T. 12. Colonization of Oceania
- T. 13. Colonization of America
- T. 14. The first villagers
- T. 15. Upper Pleistocene in Iberian Peninsula

Methodology

The development of the training activities of the course is based on: theory classes, seminars and laboratory and computer practice classes, each with its specific methodology.

These activities will be complemented by a series of tutoring sessions.

Theory classes: Two typologies have been designed, the first merely masterful and the second aimed at a dialogue at all times open on the relevant topic.

In the first, students acquire the scientific knowledge of the subject by attending theory classes: master classes with ICT support, which will complement the personal study of the topics presented. The audiovisual material used in class can be found by students in the "teaching material" tool of the Virtual Campus. These classes are conceived as a fundamentally unidirectional method of transmitting knowledge from teachers to students that forces them to develop autonomous learning strategies outside the classroom.

In the second typology, days before and sufficiently in advance, the students will be provided with the necessary documentation to discuss; students must have prepared them from the material delivered by the teachers on the Virtual Campus. These students and within the subject of human biology have already had some basic notions of some topics. Within these classes students will have the opportunity to discuss and discuss in depth the latest developments in human evolution research.

Seminars: a leading researcher will be taken to talk and discuss current issues.

Practice classes: Students come into contact with laboratory material and techniques. The results will be discussed at the end of each practice and/or the evaluable materials will be collected. Students will be able to access the protocols and practice guides through the Virtual Campus. The knowledge acquired in theory classes and in personal study is applied to the resolution of practical cases. Students work in small groups allowing them to acquire the ability to work in groups, analysis and synthesis. It also allows you to apply statistical resources in the interpretation of data.

Tutorials: The aim of these sessions is multiple: to resolve doubts, to carry out debates on topics that have been proposed in class, to orient on the sources consulted by the students and to explain the use of the necessary tools of the Virtual Campus for the proposed activities. These sessions will not be expository nor in them will advance matter of the temario, but will be sessions of debate and discussion. Much of the content of the tutorial sessions will be based on the work done by students independently.

Approximately 15 minutes will be devoted to allowing your students to answer the surveys for the evaluation of the teaching performance and the evaluation of the subject or module.

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			
Seminars	2	0.08	2, 16, 17, 18, 6
Theory I	9	0.36	2, 12, 16, 17, 18, 6, 7
Type: Supervised			
Practices	4	0.16	2, 12, 16, 17, 18, 6, 7
Theory II	9	0.36	8, 4, 2, 3, 1, 12, 16, 17, 18, 6, 7
tutoring	1	0.04	
Type: Autonomous			
Study	50	2	

Assessment

Avaluació

En tractar-se d'una avaluació continuada es tindrà en compte la participació de l'alumnat, la preparació dels seminaris, dels materials de pràctiques i les notes dels controls. Per poder assistir-hi cal que l'estudiant justifiqui haver superat les proves de bioseguretat i de seguretat que trobarà en el Campus Virtual i ser coneixedor i acceptar les normes de funcionament dels laboratoris de la Facultat de Biociències. Per a l'avaluació de l'assignatura es farà un control amb un pes del 40% de l'assignatura. L'alumnat que no hagi superat l'examen disposarà d'un control de recuperació. Respecte a les classes de teoria tipus II es poden avaluar amb la recollida d'un qüestionari de les mateixes o d'algun petit treball al respecte. En tot cas aquesta part tindrà un pes d'un 40% de la nota. Pel que fa a les pràctiques de laboratori l'assistència és obligatòria i es valora l'actitud, destresa i el divers material que lliurarà el professorat a l'alumnat en funció de la pràctica (problemes, qüestionari,...). L'assistència a les sessions pràctiques és obligatòria. L'alumnat obtindrà la qualificació de "No Avaluable" quan l'absència sigui superior al 20% de les sessions programades. Els seminaris es treballaran a classe i s'avaluaran amb l'entrega de qüestions i problemes entregats el mateix dia del seminari. El pes de les pràctiques i dels seminaris a la nota final de l'assignatura és del 20%. Per participar a la recuperació, l'alumnat ha d'haver estat prèviament avaluat en un conjunt d'activitats el pes de les quals equivalgui a un mínim de dues terceres parts de la qualificació total de l'assignatura o mòdul. Pertant, l'alumnat obtindrà la qualificació de "No Avaluable" quan les activitats d'avaluació realitzades tinguin un ponderació inferior al 67% en la qualificació final. La nota mínima en cadascuna de les parts avaluables serà de 4. Per aprovar l'assignatura la nota ha de ser igual o superior al 5.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
control	40%	0	0	2, 9, 12, 19, 13, 16, 17, 15, 18, 28, 26, 30, 24, 6, 7
intervenció en les classes de teoria tipus II	40%	0	0	8, 4, 2, 3, 1, 5, 9, 10, 11, 12, 19, 13, 14, 16, 17, 15, 18, 20, 23, 21, 22, 28, 27, 24, 6, 7, 31
pràctiques i seminaris	20%	0	0	8, 4, 2, 3, 1, 12, 14, 16, 17, 18, 20, 23, 21, 22, 29, 28, 27, 25, 26, 24, 6, 7

Bibliography

REFERENCES

Lee BERGER i John HAWKS 2017. *Almost humans: The Astonishing Tale of Homo naledi and the Discovery that changed our human story*. Ed. Penguin USA.

Robert BOYD i Joan B. SILK. 2004. *Como evolucionaron los humanos*. Ariel Ciencia.

Domingo CAMPILLO i M. Eulàlia SUBIRÀ. 2004. *Antropología Física para arqueólogos*. Ed. Ariel Prehistoria.

Eudald CARBONELL (Coordinador). 2005. *Homínidos las primeras ocupaciones de los continentes*. Ariel.

Clark Spencer LARSEN. 2010. *A Companion to Biological Anthropology*. Wiley-Blackwell.

Marina LOZANO i Xose Pedro RODRÍGUEZ. 2010. *Dón venim? l'origen de l'Homo sapiens*. Ed: Rafael Dalmau, col·lecció evolucionaria núm 2.

Michael P. MUEHLENBEIN. 2010. *Human Evolutionary Biology*. Cambridge University Press.

Daniel TURBÓN. 2006. *La evolución humana*. Ariel.

SPECIFIC REFERENCES

La mayor parte de la asignatura se basará en bibliografía específica que se facilitará a lo largo de la impartición de la materia.

Software

Not required