General information		
Academic subject	Human Phylogeny and Evolution	
Degree course	Degrees in Biology	
Academic Year	I - II - III, 2021 - 2022	
European Credit Transfer and Accumulation System (ECTS)		4
Language	Italian	
Academic calendar (starting and ending date)		Second semester - March - June, 2021
Attendance	Mandatory	

Professor/ Lecturer	
Name and Surname	Eligio Vacca
E-mail	eligio.vacca@uniba.it
Telephone	+39 080 5442058 - 3341
Department and address	Department of Biology - Univ. of Bari Aldo Moro - Via Orabona 4, 70125 Bari, Italy
Virtual headquarters	
Tutoring (time and day)	By appointment (telephone or e-mail)

Syllabus	
Learning Objectives	Acquiring basic knowledge necessary to understand and critically analyze the current framework on knowledge on the phylogeny and the evolution of human forms.
Course prerequisites	Basic knowledge of human anatomy and genetics.
Contents	The Human Phylogeny as a natural history of man, fundamental concepts, principles, methods. Modern taxonomic systems, evolutionary theories, Charles Darwin and Alfred R. Wallace, evolution by natural selection, the modern synthesis, the problem of the origin of man. Times in human evolution, bio-series, geological dating, paleo-environmental reconstruction, bio-fractionation. Primates, taxonomy and phylogeny, origins, radiations and divergences. Plio-pleistocene hominids, Pre-Australopithecines, Australopithecines, Paranthropus, origins, variability, evolution of bipedal locomotion, relevant fossils. The genus Homo, the appearance, relevant fossils. The process of encephalization, implications on energetics. Bipedalism, brain size, and sexual dimorphism. Early human expansions into Eurasia, *Homo erectus*, regional morphological variation and phylogenetic implications. The first human peopling of the Europe, the Neanderthal cline, characterization, hypothesis on the origin, diffusion, relevant fossils. The anatomically modern humans, the appearance, theories on the origin and diffusion, relevant fossils. Phylogenetic relationships between anatomically modern humans and other possible archaic forms, contribution of molecular anthropology. Outline of intraspecific variability of the current human populations, some adaptive polymorphisms.
Books and bibliography	R.G. Klein, 2009. The Human Career. Human Biological and Cultural. Origins. Univ. of Chicago Press. C. Stringer & P. Andrews, 2012. The Complete World of Human. Evolution. Thames & Hudson Pub., London - New York. B. Wood, 2019. Human Evolution: A Very Short Introduction. Oxford University Press; 2nd ed., ISBN-10: 0198831749
Additional materials	Additional lecture notes to complete the study and for updates will be provided.

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
	32		
ECTS			
	4		
Teaching strategy		Lecture, PowerPoint presentations, videos, physical and virtual replicas of fossil Hominids.	
Expected learning outcomes			
Knowledge and understanding on:		Knowledge of the Hominins phylogeny, of their origin and biological evolution. Understanding the evolutionary processes originating the various human forms.	
Applying knowledge and understanding on:		Application of phylogenetic models to highlight the nodal events in the emergence and development of the various forms of the human line. Ability to explain the evolutionary meaning of polymorphisms with adaptive meaning and of some aspects of the current human variability.	
Soft skills		*Making informed judgments and choices* Autonomous skills in the evaluation and interpretation of paleontological, morphological and paleomolecular data in the phylogeny of humans. *Communicating knowledge and understanding* Ability to communicate the basic aspects of the natural history of man and the variability of ancient and recent human populations. *Capacities to continue learning* Acquisition of the ability to understand evolutionary dynamics at the origin of the human line and its variability.	

Assessment and feedback	
Methods of assessment	Oral examination preceded by a written test
Evaluation criteria	*Knowledge and understanding* Evaluation of the acquired knowledge in the unitary framework of human phylogeny. *Applying knowledge and understanding* The ability to integrate and contextualize palaeontological, morphological and molecular data in the reconstruction of the evolutionary dynamics of the human phyletic lines is required. *Autonomy of judgment* Evaluation of the capacity for critical discussion of the evolutionary models currently proposed in relation to the origin of present and past human forms. *Communicating knowledge and understanding* Knowledge of some aspect of human variability and understanding of their possible adaptive meaning. *Communication skills* Adequate level of communication skills in presenting data and discussing evolutionary models in hominid phylogeny. *Capacities to continue learning* Critical appraisal of literature updating.
Criteria for assessment and attribution of the final mark	Exam with mark out of 30, 18 the minimum passing grade. At least two topics proposed among the course contents will be discussed.
Additional information	