Main course information	
Academic subject	Anthropology
Degree course	Science of Nature and Environment
Degree class	LM-60 & LM-75
ECTS credits (CFU)	6
Compulsory attendance	Strongly recommended
Teaching language	Italian
Accademic Year	2019/2020

Professor/Lecturer	
Name & SURNAME	Sandro Sublimi Saponetti
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Tutorial time/day	On Tuesday and Wesneday from 11,00 to 12,00. Please write an e-mail to take an appointment

Course details	Pass-fail exam/Exam with mark out of 30	SSD code	Type of class
	Physical Anthropology in Archaeology	BIO/08	Lecture and lab

Teaching schedule	Year	Semester
	II	I

Lesson type	CFU/ECTS	Lessons (hours)	CFU/ECTS lab	Lab hours	CFU/ECTS tutorial/workshop	Tutorial/workshop hours	CFU/ECTS field trip	Field trip Hours
	5	40	-	-	I	15	-	-

Time management	Total hours	Teaching hours	Self-study hours
	150	55	95

Academic Calendar	First lesson	Final lesson
	October	January

Syllabus	
Course entry requirements	
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	
Knowledge and understanding	Internship at 3D printing centres with the acquisition of scanning techniques and rapid prototyping of study findings. Acquisition of multimedia tools for spatial detection and graphic representation (autocad).
Applying knowledge and understanding	The student is put in the conditions to operate on the field the detection and recovery of the skeletal remains of an individual through the knowledge of the principles of the taphonomy and the diagenesis of the chemical elements of the bone; to be able to draw up a biological profile card with the main individual parameters (age of death, gender, height, body biomass); to be able to conduct a survey of the main dental and skeletal markers of nutritional and occupational stress; the main theoretical assumptions for differential diagnostics of the main skeletal pathologies; to learn and know how to use single- and multivariate methods of analysis (chi quadro, sample matching coefficient, mahalanobis distance, shape distance, cladograms, analysis of the main components) in synchronous and diachronic comparisons between skeletal series.
Making informed judgements and choices	Ability to plan an intervention of forensic anthropology on the archaeological field evaluating the biotic and abiotic conditions of the substrate and conservation of the remains. Ability and autonomy of intervention on human

	skeletal remains in the laboratory evaluating the appropriate procedures on a case-by-case basis.
Communicating knowledge and understanding	In the course of study, there will be conferences, learning methods of communication and disseminating research to an expert audience and to a non-specialised public, relations with local authorities, public administrations and publications. Use of multimedia tools, acquisition of design skills and collaboration with professional figures of foreign university departments through the use of the English language.
Capacities to continue learning	Learning skills of discipline updates through the correct use of IT tools (social networks dedicated to scientific disciplines, discussion groups, bibliographic updates, multimedia). Autonomy of elaboration and execution of procedures within multidisciplinary projects.

Syllabus	
Course content	**Zoological framework of the human species**: indications on the biological evolution of primates; the great African and Asian anthropomorphic monkeys (Pan, Gorilla, Pongo, hylobates); men, hominids and hominids. Evolutionary history of our species. **Characteristics of the human skeleton**: morphology, function, biomechanics, adaptation. Chemical-physical properties of bone tissue. The anthropological study of the skeletal remains recovered in the archaeological excavation. **The Anthropology on the Field**: Recognition and interpretation of gestures around a burial. The individual primary burials; labile joints and persistent joints. The decomposition of the body into an empty space. Decomposition in a full space. Filling the volume inside the corpse. Secondary burials. Multiple and collective burials. The chronology of depositions in multiple primary burials. Laboratory survey: methods of cleaning and restoring bone remains; handling of findings for chemical and molecular investigations; paleonnutrition, finding trace elements in bone; isotopic analysis of oxygen in tooth enamel; extraction and characterization of DNA; cataloguing and recording of findings and correlation with excavation data; attribution of the minimum number of individuals. **The determination of sex and age of death**. Methods for the diagnosis of sex on the skeletal remains of adults and sub-adults. Methods for determining age of death in adults and sub-adults. **Morphometry and skeletal morphoscopy**: Measures and indices for the reconstruction of body proportions. Estimated height and body biomass. Comparison between skeletal series with varied and multivariate methods of analysis: simple matching coefficient, shape distance, matrix and cladogram construction. Elements of Analysis of the Main Components. **The reconstruction of the daily life of the ancient populations**: the dental and skeletal indicators of stress. Nutritional and/or disease stress indicators; dental and skeletal markers of occupational stress. Elements of geometry of cross section diaphysial long bones (cross sectional geometry). Paleopathology: the concept of pathogens according to Grmek, infection and inflammation of the bone, inflammatory pathologies and non-specific and specific, pathologies of deficient origin, war traumatology, craniectomies performed on the living. **Manual reconstruction of the face starting from the skull**. Acquisition of 3D laser scanners and rapid prototyping of an original cast. Manchester protocol and facial reconstruction techniques of the Forensic Anthropology.
Course books/Bibliography	Mallegni F. , Lippi B. (a cura di), Non Omnis Moriar. CISU, Roma, 2008. Perrino G., Sublimi Saponetti S. (a cura di), Una finestra sulla storia. Un cavaliere a Castiglione tra angioini e aragonesi, Società di Storia Patria per la Puglia, Sezione

	Nordest Barese, Conversano, 2017.
Notes	
Teaching methods	Power Point projection, visualization and manipulation of findings; application of methods for reconstruction of biological profile, age of death and diagnosis of sex, assessment of dental and skeletal stress indicators and detection of pathological stigmata using differential diagnostic methods; case studies and problem solving; learning to use measuring instruments, binocular microscope shall be used.
Assessment methods (indicate at least the type written, oral, other)	Oral, practice
Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are	The student must first know the physico-chemical characteristics of the biological study material and its properties to adapt to different environmental conditions and to change accordingly. The study of bone changes (both global and localized) due to stress conditions of nutrition, work and disease and bone reaction (erosion and osteoproliferation)is the basis for the anthropological investigation which starts from the effects to trace the causes. The student must also equip himself with the cognitive tools to start all the analyses that take place on such finds and have a general knowledge of the other disciplines that deal with the study of the past (archaeology, archeozoology, archeobotanica, history, earth sciences) having clear the concept of contextualization space-time of every finds. Finally, it must be able to apply the methods of archaeology in the study of human bone remains and to confront experts in other disciplines.
Further information	