

Degree programme	Type	Course
Genetics	OP	4

Contact lecturer

Name : Xavier Jordana Comin

Email : xavier.jordana@uab.cat

Teaching staff

María Molina Moreno

Nuria Armentano Oller

Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

There are no official prerequisites, but it is assumed that the student has previously acquired enough solid knowledge on subjects like Genetics and Human biology

Objectives

The course of forensic anthropology is designed to provide students the basic tools to manage biological information about personal identification. It is based on the application of knowledge of physical anthropology and human biology to medical and legal aspects, basically identification. We work at morphological, osteological, biochemical and molecular level. The work identifying both individual and collective lives of individuals, as the recent and ancient corpses. The emphasis in both forensic application, as in the reconstruction of ancient populations.

In this regard the course aims to:

- Understanding human variability as a source of individualization
- To know the morphological variability of characters distinctive of human groups
- To understand and interpret biochemical and molecular variability
- To analyse the biological basis of human diversity by different identification techniques
- To understand the taphonomical effects to interpret forensic situations
- To know the statistical basis of identifications

Learning outcomes

- CM22 (Evaluate the scientific validity and ethical-legal implications of genetic testing and advanced therapies.) Evaluate the scientific validity and ethical-legal implications of genetic testing and advanced therapies.
- KM17 (Describe the principles of population genetics and human evolution, as well as their applications in the forensic and biomedical fields.) Describe the principles of population genetics and human evolution, as well as their applications in the forensic and biomedical fields.
- SM19 (Apply molecular, cytogenetic, and computational techniques in genetic diagnosis and human forensic identification.) Apply molecular, cytogenetic, and computational techniques in genetic diagnosis and human forensic identification.

Contents

- Legal framework of forensic anthropological studies
- Identification of living people and recent corpses
- Decay and conservation
- Taphonomy
- Field anthropology
- Identification from human remains
- Forensic anthropology in major catastrophes

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Theoretical classes	15	0.6	CM22, KM17
Seminars	2	0.08	CM22, SM19
Group work	8	0.32	CM22, SM19
Individual work	25	1	KM17
Individual work	2	0.08	CM22
Group work	12	0.48	CM22, SM19
Laboratory practices	9	0.36	CM22, SM19

The nucleus of the learning process is the work of the student. The student learns working, being the mission of the teaching staff to help him/her in this task by providing information, or showing them the sources where they can achieve the most recent and efficient information. In line with these ideas and in accordance with the objectives of the subject, the development of the course is based on the following activities:

Theoretical teaching: The student acquires the scientific and technical knowledge of the course, attending the theoretical classes and complementing them with the personal study of the topics explained. The theoretical classes are conceived as a method of transmitting the teacher's knowledge to the student. However, an important part of the discussion of topics will be proposed or subjects developed using a methodology of Problem-based learning. Whenever possible, students will work in small groups. With enough anticipation, the

student will know the topics to debate and discuss on the virtual forums. The audiovisual material used in class will be provided by the teacher through a virtual campus.

Seminars: seminars will focus on specific topics of theory. The students will work in small groups allowing them to acquire the ability to work in groups and also to analyze and do synthesis.

Practices: The topics related to osteology and diagnoses will be mainly taught in theoretical-practical classes with small groups of students in the laboratory. They are designed to learn osteology and its variability, and are complemented by theoretical information. Students will have a detailed work guidebook. In order to achieve good performance and acquire the corresponding competencies, a comprehensive reading of the proposed practice is essential before its completion. The follow-up of the practical class will also involve the individual collection of the results in a dossier of activities. To be able to attend the practical classes it is necessary for the student to justify having passed the biosafety and security tests that he will find in the Virtual Campus and be knowledgeable and accept the rules of operation of the laboratories of the Faculty of Biosciences.

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.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
written test	50%	2	0.08	CM22, KM17, SM19
Group work	20%	0	0	CM22
Participation and work on practices	30%	0	0	CM22, SM19

Continuous Assessment

As this is a continuous assessment, the student's participation, seminar preparation, practical materials, and test score will be taken into account. The final result will be the weighted sum of each component.

A written exam will be conducted to assess the theoretical content of the course (50%), including content covered in the practical sessions. A minimum score of 4 is required on this exam for it to be included in the final grade. This exam can be retaken during the resit period.

Practical sessions account for 30% of the final grade. The assessment will consider both the students' attitude and the work carried out in the lab, as well as the required reports. Attendance at practical sessions is mandatory and a requirement to pass the course. Students will receive a "Not Assessable" grade if their absence exceeds 20% of the scheduled sessions.

The seminar will be used to discuss group work and will account for 20% of the final grade. All students in the same group will receive the same grade for this component, adjusted based on individual contributions to the work.

To pass the course, the final grade must be equal to or greater than 5.

A student will be considered "Not Assessable" if they have completed less than 50% of the assessment activities.

Single Assessment

The single assessment consists of a single synthesis exam that will evaluate the content of the entire theoretical program of the course. The grade obtained in this synthesis exam will account for 50% of the final

grade. The single assessment exam will take place on the same date scheduled for the continuous assessment exam, and the same resit system will apply.

The evaluation of the practical and seminar activities will follow the same process as in the continuous assessment. The grade obtained will account for 50% of the final grade. Students opting for the single assessment may submit all required evidence (practical report and seminar work) on the same day as the synthesis exam. The seminar work may be completed individually. The same resit system and "Not Assessable" criteria as in the continuous assessment will apply.

Artificial Intelligence (AI)

Permitted use: "In this course, the use of Artificial Intelligence (AI) technologies is allowed as an integral part of the development of the work, provided that the final result reflects a significant contribution from the student in terms of analysis and personal reflection. The student must clearly identify which parts were generated using this technology, specify the tools used, and include a critical reflection on how these influenced the process and final outcome of the activity. Lack of transparency in the use of AI will be considered academic dishonesty and may result in a penalty in the activity grade or more severe sanctions in serious cases."

"The commission of any irregularity in an assessment activity (academic fraud, plagiarism, or misuse of AI, unless such use is explicitly authorized in the course guide) that may lead to a significant alteration of the grade will result in that activity being graded with a 0. If the course guide establishes that obtaining a minimum grade in this assessment activity is an essential requirement to pass the course, or if multiple irregularities occur in the assessment activities of the same course, the final grade for the course will be 0. Furthermore, disciplinary proceedings may be initiated against any student who incurs any of these irregularities."

Bibliography

Basic literature:

WHITE T, BLACK MT & FOLKENS PA. Human Osteology.- Academic Press (diverses edicions)

LANGLEY, NR AND TERSIGNI-TARRANT MT. (2017) Forensic Anthropology: a comprehensive introducción (2n ed). CRC Press

HAGLUND SD & SORG MH. (1997) Forensic Taphonomy: the postmortem fate of Human Remains. CRC Press

JOBLING, M.A. i HURLES, M.E. (2004). Human Evolutionary Genetics - origin, peoples & disease. Garland Science. Cap. 15

WEINER MP, GABRIEL SB & STEPHENS JC. (2007) - Genetic variation. A laboratory manual. Cold Spring Harbor. Cap.34

OBERTOVA Z, STEWART A, CATTANEO C (2020).- Statistics and probability in Forensic Anthropology.- Elsevier

Specific literature

It will be given during the course.

Software

no aplica

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE