



General information	
Academic subject	<i>Molecular Anthropology and genetics of the addiction related traits</i>
Degree course	<i>Scienze Biosanitarie (LM-6)</i>
Academic Year	2021/2022
European Credit Transfer and Accumulation System (ECTS)	4 (3+1)
Language	<i>Italian</i>
Academic calendar (starting and ending date)	<i>March-June 2022</i>
Attendance	<i>Suggested</i>

Professor/ Lecturer	
Name and Surname	Francesco Montinaro
E-mail	Francesco.montinaro@uniba.it ; francesco.montinaro@gmail.com
Telephone	0805443583
Department and address	<i>Dipartimento di Biologia</i>
Virtual headquarters	
Tutoring (time and day)	Mondays and tuesdays 13.30-15.30

Syllabus	
Learning Objectives	<i>The course has the main objective of exploring the evolution of human populations under the lens of phenotypical variations, including those relevant under a clinical perspective. We will evaluate the links between genetics and behavioral traits, with a focus on substance use disorders.</i>
Course prerequisites	
Contents	<ul style="list-style-type: none"> - Introduction to Molecular Anthropology - Assessing the genetic variation - The Origin of Homo sapiens - Evolutionary processes and genomic variability - The distribution of genomic variability - The peopling of Europe, America and Australia - Genome Wide Association Studies - GWAS and behaviours - GWAS for Substance Use Disorders - Pharmacogenomics
Books and bibliography	<p><i>Course Slides</i></p> <p><i>Human evolutionary Genetics (Mark Jobling)</i></p> <p><i>Human molecular genetics 2 – Strachan & Read – Ed. UTET</i></p> <p><i>Behavioral Genetics (Robert Plomin)</i></p>
Additional materials	

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
100	24	12	64

ECTS	
4	3
Teaching strategy	
Expected learning outcomes	
Knowledge and understanding on:	Acquisition of knowledge of fundamental notions in Molecular anthropology and of genetics features affecting the substance use disorders
Applying knowledge and understanding on:	The bioinformatic nature of the lab activities allows the student to learn to efficiently use the computational and statistical tools commonly harnessed for the study of genetic variability of human populations and those related to the investigation of Substance Use Disorder.
Soft skills	<ul style="list-style-type: none"> • <i>Making informed judgments and choices</i> The students will acquire 1) the ability of evaluating the genetic variability extant in human populations in light of human evolution. 2) analytical skills for the genetic variation assesment. 3) skills that will allow to critically evaluate and manage the many aspects behind the links between genetics and phenotypic variation, with a particular focus on traits related to Substance Use disorders. • <i>Communicating knowledge and understanding</i> The students will achieve strong skills in the presentation, evaluation and critical assesment of many aspects related to human, evolution, Behavior and SUDs genetics. • <i>Capacities to continue learning</i> <i>The Students will be able to understand and further characterise the subject of the course through the use of peer-reviewed scientific articles and bioinformatic database mining.</i>
Assessment and feedback	
Methods of assessment	<i>Oral exam</i>
Evaluation criteria	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> Understanding of the interaction between molecular mechanisms and phenotypes, including clinically relevant ones. • <i>Applying knowledge and understanding</i> Understanding of the use of the main statistical and bioinformatic techniques in for the study of molecular anthropology • <i>Autonomy of judgment</i> Assesment skills in the evaluation of scientific articles • <i>Communicating knowledge and understanding</i> • <i>Communication skills</i> Ability to present in an efficient and concise way the fundamental notions for the study of Anthropology.
Criteria for assessment and attribution of the final mark	<i>Oral Exam with evaluation on a 30/30 marking scale. The students can present, in the form of slideshow, a scientific article on Human evolution, Behavior genetics and/or substance Use Disorders genetics.</i>



UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO

DIPARTIMENTO DI BIOLOGIA

Additional information	