

Converging Technologies for Biomolecular Systems (TeCSBI) - 42nd cycle

course	SSD	Type of activity	language	hrs	credits	year of attendance	final test	optional/ mandatory
FUNDAMENTALS OF BIOSTATISTICS	INF/01	lesson	English	8	1	2 nd	YES	optional
DECODING THE EFFECT OF DIET ON HUMAN HEALTH THROUGH THE GUT MICROBIOME	AGR/16	lesson	English	8	1	1 st	YES	optional
DRUG DISCOVERY: FROM BENCH TO MARKET	CHIM/06	lesson	English	8	1	1 st	YES	optional
DRUG DELIVERY: FUNDAMENTAL PRINCIPLES AND TECHNOLOGIES	BIO/12	lesson	English	8	1	2 nd	YES	optional
ESTIMATION THEORY	IINF/04A	lesson	English	8	1	1 st	YES	optional
NMR SPECTROSCOPY APPLICATIONS TO LIGAND-RECEPTOR STUDIES*	CHEM-05/A	lesson	English	8	1	1 st	YES	optional
SINGLE-CELL RNA SEQUENCING DATA PREPROCESSING AND ANALYSIS	INF/01	lesson	English	8	1	2 nd	YES	optional
LONG READ SEQUENCING OF ENTIRE GENOMES AND TRANSCRIPTOMES	BIO/11	lesson	English	8	1	1 st	YES	optional
TRANSCRIPTION NETWORKS MODELS	IINF/04A	lesson	English	8	1	1 st	YES	optional
ADVANCED CELLULAR MODELS AND METHODS FOR STUDYING METABOLISM AND SIGNALING ALTERATIONS IN SOLID TUMORS	BIO/10	lesson	English	8	1	1 st	YES	optional
PHYLOGENETIC METHODS FOR BIODIVERSITY RESEARCH	BIO/05	lesson	English	8	1	1 st	YES	optional
THE PRINCIPLE OF 3R IN BIOMEDICAL STUDIES**	BIO/17	lesson	Italian/English	8	1	1 st	YES	optional
SCANNING AND TRANSMISSION ELECTRON MICROSCOPY, PRINCIPLES AND APPLICATIONS*	GEO/06	lesson	English	8	1	1 st	YES	optional
CHARACTERISATION OF METABOLIC PHENOTYPES VIA DATA INTEGRATION	INF/01	lesson	English	8	1	1 st	YES	optional
ADVANCED THERAPIES, PROGNOSTIC AND DIAGNOSTIC BIOMARKERS IN CANCER DISEASES	BIO/12	lesson	English	8	1	1 st	YES	optional
INTRODUCTION TO MACHINE LEARNING	INF/01	lesson	English	8	1	1 st	YES	optional
ENTREPRENEURSHIP, TT, INNOVATION AND IP MANAGEMENT	CHIM/06	lesson	Italian/English	8	1	2 nd	YES	optional
VALORIZING MICROBIAL BIODIVERSITY FOR SUSTAINABLE BIOPROCESSES AND HUMAN WELLBEING	CHIM/11	lesson (seminars)	English	8	1	1 st	YES	optional
QUASI-STEADY STATE APPROXIMATION (QSSA)	IINF/04A	lesson	English	8	1	1 st	YES	optional
INTRODUCTION TO NETWORK ANALYSES FOR STUDYING INTERACTIONS	BIO/07	lesson	English	8	1	1 st	YES	optional
ADVANCED FUNCTIONAL APPROACHES FOR CELL BEHAVIOUR INVESTIGATION	BIO/09	lesson	English	8	1	1 st	YES	optional
STEM CELL-BASED EXPERIMENTALS TREATMENTS FOR NEURODEGENERATIVE DISEASES	BIO/13	lesson (seminars)	English	8	1	1 st	YES	optional

MICROBIOME OF THE BUILT ENVIRONMENT AND HUMAN HEALTH: FROM LAB TECHNOLOGIES TO CITIZEN SCIENCE	AGR/16	lesson (seminars)	English	8	1	1 st	YES	optional
UNDERSTANDING ALPHAFOLD3 MOLECULAR MODELLING	BIO/11	lesson	English	8	1	1 st	YES	optional
Total hrs/credits				192	24			

* course provided by the PhD programme in Chemical, geological and environmental sciences

** course provided by the PhD programme in Neuroscience