Strategic Innovation for Sustainable and Smart Ecosystems - 42nd cycle

course	SSD	Type of activity	language	hrs	credits	year of attendance	final test	optional/ mandatory	track
METODI PER LA RICERCA I/ RESEARCH METHODS I	SPS/09	lesson	English	8	1	1st	YES	mandatory	all tracks
METODI PER LA RICERCA II/RESEARCH METHODS II	SECS-S/01	lesson	English	8	1	1st	YES	mandatory	all tracks
METODI PER LA RICERCA III/RESEARCH METHODS III	ING-INF/05	lesson	English	8	1	1st	YES	mandatory	all tracks
COMPRENDERE L'INNOVAZIONE /UNDERSTANDING INNOVATION	SECS-P/08	lesson	English	16	2	1st	YES	mandatory	all tracks
GESTIONE DELL'INNOVAZIONE SOSTENIBILE/ MANAGING SUSTAINABLE INNOVATION	GEO/02	lesson	English	8	1	1st	YES	mandatory	all tracks
DISUGUAGLIANZA SOCIALE & GIUSTIZIA SOCIALE I/ SOCIAL INEQUALITY & SOCIAL JUSTICE I	SPS/01	lesson	English	8	1	1st	YES	mandatory	all tracks
DISUGUAGLIANZA SOCIALE & GIUSTIZIA SOCIALE II/ SOCIAL INEQUALITY & SOCIAL JUSTICE II	SPS/01	lesson	English	8	1	1st	YES	mandatory	all tracks
PUBLIC MANAGEMENT	ECON-06	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 3
INNOVATION MANAGEMENT & ENTREPRENEURSHIP	SECS-P/08	lesson	English	16	2	1st	YES	optional	TRACK 3
SOCIAL MEDIA ANALYTICS	INF/01	laboratory	English	12	1	1st	YES	optional	TRACK 1
EXPLAINABLE AI FOR BUSINESS VALUE	INF/01	laboratory	English	12	1	1st	YES	optional	TRACK 1
SCIENTIFIC COMPUTING WITH PYTHON	ING-INF/01	lesson	English	16	2	1st	YES	optional	TRACK 2
INTRODUCTION TO PLASMA BOUNDARY IN FUSION DEVICES	PHYS/01	lesson	English	16	2	2nd	YES	optional	TRACK 2
DEEP LEARNING FOR PHYSICISTS	INFO-01/A	lesson	English	16	2	1st	YES	optional	TRACK 2
ADVANCED PLASMA PHYSICS: WAVE IN INHOMOGENEOUS PLASMA AND KINETIC DESCRIPTION	PHYS/03	lesson	English	16	2	1st	YES	optional	TRACK 2
RECENT DEVELOPMENTS IN PLASMA PHYSICS	PHYS-03/A	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 2
DEEP LEARNING FOR PHYSICISTS B	INFO-01/A	lesson	English	16	2	2nd	YES	optional	TRACK 2
NON LINEAR EXCITATION FOR IMAGING TECHNIQUES	PHYS-03/A	lesson	English	8	1	1st	YES	optional	TRACK 2
OPTIMIZATION METHODS	INF/01	lesson/laboratory	English	20	2	1st	YES	optional	TRACK 1 - 2
DESIGN OF EXPERIMENTS	INF/01	lesson	English	16	2	1st	YES	optional	TRACK 1 - 2
EFFICIENT ALGORITHMS	INF/01	lesson	English	16	2	1st	YES	optional	TRACK 1 - 2
FOUNDATIONAL MODELS	INF/01	lesson/laboratory	English	20	2	1st	YES	optional	TRACK 1 - 2
MACHINE LEARNING PARADIGMS	INF/01	lesson/laboratory	English	20	2	1st	YES	optional	TRACK 1 - 2
PERFORMANCE EVALUATION AND DATA CENTRIC AI	INF/01	lesson	English	16	2	1st	YES	optional	TRACK 1 - 2

PRINCIPLES OF ELECTRON MICROSCOPY AND APPLICATIONS TO NANOMATERIALS RESEARCH	FIS/03	lesson	English	8	1	1st	YES	optional	TRACK 2
THE ROLE OF INORGANIC SYSTEMS IN FORMULATIONS : CHEMISTRY INSIGHTS AND APPLICATIONS	CHIM/03	lesson	English	8	1	1st	YES	optional	TRACK 2
INTRODUCTION TO MACHINE LEARNING	INF/01	lesson	English	8	1	1st	YES	optional	TRACK 1-2
ADVANCED THERAPIES, PROGNOSTIC AND DIAGNOSTIC BIOMARKERS IN CANCER DISEASES	BIO/12	lesson	English	8	1	1st	YES	optional	TRACK 4
ENTREPRENEURSHIP, TT, INNOVATION AND IP MANAGEMENT	CHIM/06	lesson	Italian/English	8	1	2nd	YES	optional	TRACK 1-2-3-4
DRUG DISCOVERY: FROM BENCH TO MARKET	CHIM/06	lesson	English	8	1	1st	YES	optional	TRACK 4
SOCIAL RESEARCH DESIGN	SPS/07	lesson	English	16	2	1st	YES	optional	TRACK 3
CURRENT DEBATES IN SOCIAL SCIENCE	SPS/07	lesson	English	32	4	1st	YES	optional	TRACK 3
ANTROPOLOGIA, SOCIETA' CIVILE E MONDO DEL LAVORO	M-DEA/01	lesson	English	16	2	1st	YES	optional	TRACK 3
METODOLOGIA DELLA RICERCA ETNOGRAFICA	M-DEA/01	lesson	English	32	4	1st	YES	optional	TRACK 3
PEDAGOGICAL ISSUES IN EDUCATIONAL RESEARCH	M-PED/02 M-PED/01 M-PED/03	lesson	English	40	5	1st	YES	optional	TRACK 3
METHODOLOGICAL ISSUES IN EDUCATIONAL RESEARCH	M-PED/01 M-PED/03	lesson	English	32	4	1st	YES	optional	TRACK 3
NANOTECNOLOGIE BIOMEDICHE E TERAPIE AVANZATE / BIOMEDICAL NANOTECHNOLOGIES AND ADVANCED THERAPIES	BIO/10	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 4
NAVIGARE NELLA LETTERATURA SCIENTIFICA: CRITERI CHIAVE PER UNA ANALISI CRITICA / READING OF SCIENTIFIC PAPERS: TOP TIPS FOR A CRITICAL NAVIGATION	BIO/14	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 1-2-3-4
PIANIFICAZIONE E CONDUZIONE DI UNO STUDIO CLINICO / PLANNING AND CONDUCTION OF A CLINICAL STUDY	MED/41	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 4
PATIENT-DERIVED IN VITRO GLIOMA MODELS: FROM PATIENTS TO DISH TO 3D BIOPRINTING TECHNOLOGY.	MED/03	lesson	English	8	1	1st	YES	optional	TRACK 4
THE POLLUTED BRAIN: THE AIR WE BREATHE, THE BRAIN WE HAVE	BIO/09 - FISIOLOGIA	lesson	English	8	1	3rd	YES	optional	TRACK 4
THE PRINCIPLE OF 3R IN BIOMEDICAL STUDIES	BIO/17	lesson	English	16	2	1st	YES	optional	TRACK 4
IN VIVO IMAGING FOR ANIMAL MODELS OF DISEASE AND PATIENTIS	MED/50	lesson	English	8	1	2nd	YES	optional	TRACK 4
COMMUNICATION OF CLIMATE CHANGE	GEO/12	lesson	English	8	1	1st	YES	optional	TRACK 2
SCANNING AND TRANSMISSION ELECTRON MICROSCOPY, PRINCIPLES AND APPLICATIONS	GEO/06	lesson	English	28	3	1st	YES	optional	TRACK 2
MACHINE LEARNING FOR MULTIVARIATE DATA ANALYSIS	CHIM/01	lesson	English	20	2	1st	YES	optional	TRACK 2
OPEN-SOURCE SOFTWARE FOR SPATIAL DATA ANALYSIS	GEO/04	lesson	English	16	2	1st	YES	optional	TRACK 2
TIME SERIES ANALYSIS OF ENVIRONMENTAL DATA	GEO/05	lesson (seminars)	English	20	2	1st	YES	optional	TRACK 2
NMR SPECTROSCOPY APPLICATIONS TO LIGAND-RECEPTOR STUDIES	CHIM/06	laboratory	English	20	2	1st	YES	optional	TRACK 2
LEGAL RESEARCH METHOD	IUS/13 IUS/20	lesson	English	16	2	1st	YES	optional	TRACK 3

METHODS AND TECHNIQUES IN URBAN AND REGIONAL STUDIES	SPS/08 SPS/10 M-GGR/01 M-DEA/01	lesson	English	32	4	1st	YES	optional	TRACK 3
URBAN-REGIONAL ISSUES AND POLICY	SPS/10 SPS/07 SPS/08	lesson	English	64	8	1st	YES	optional	TRACK 3
BASICS OF VR/AR HUMAN-COMPUTER INTERACTIONS	M-PSI/01	lesson	English	8	1	1st	YES	optional	TRACK 3-4
NEURAL NETWORKS IN COGNITIVE SCIENCE	M-PSI/01	lesson	English	8	1	1st	YES	optional	TRACK 3-4
PSYCHOMETRIC NETWORK ANALYSIS	M-PSI/03	lesson	English	8	1	1st	YES	optional	TRACK 3-4
AMBULATORY ASSESSMENT FOR DATA COLLECTION IN NATURAL ENVIRONMENT	M-PSI/08	lesson	English	8	1	1st	YES	optional	TRACK 3-4
UNDERSTANDING THE UI/UX DESIGN PROCESS	M-PSI/02 ING/INF/05	lesson	English	8	1	1st	YES	optional	TRACK 3-4
INTRODUCTION TO PUBLIC HEALTH	MEDS-24B	lesson	English	8	1	1st	YES	optional	TRACK 4
PUBLIC HEALTH EPIDMIOLOGY	MEDS-24B	lesson	English	16	2	1st	YES	optional	TRACK 4
SURVIVAL ANALYSIS METHODS FOR CLINICAL RESEARCH	MEDS-24/A	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 4
ECONOMIC EVALUATIONS OF HEALTHCARE PROGRAMMES	MEDS-24B	lesson (seminars)	English	16	2	1st	YES	optional	TRACK 4
SYSTEMATIC REVIEWS	MEDS-24B	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 1-2-3-4
HEALTH SERVICES ORGANIZATION	MEDS-24B	lesson (seminars)	English	8	1	2nd	NO	optional	TRACK 4
BURDEN OF DISEASE	MEDS-24B	lesson (seminars)	English	8	1	3rd	NO	optional	TRACK 4
HEALTH ECONOMICS	GSPS-02/A	lesson (seminars)	English	24	3	1st	NO	optional	TRACK 4
STATISTICAL MEHTODS FOR HEALTH SERVICES AND SYSTEMS ASSESSMENT	STAT-03/B	lesson (seminars)	English	8	1	1st	YES	optional	TRACK 4

TRACK 1 - Innovation of Processes
TRACK 2 - Innovation of Products
TRACK 3 - Innovation in Society & Organizations
TRACK 4 - Innovation and Welfare