

Chemical, Geological and Environmental Sciences - 42nd cycle

course	SSD	Type of activity	language	hrs	credits	year of attendance	final test	optional/ mandatory	curriculum
SCIENCE: OBSERVATION AND PREJUDICE	GEOS-02/B	lesson	English	8	1	1 st	YES	optional	Intercurricular
COMMUNICATION OF CLIMATE CHANGE	GEOS-04/C	lesson	English	8	1	1 st	YES	optional	Intercurricular
THE CLIMATIC ROLE OF ATMOSPHERIC AEROSOL IN THE ARCTIC	CHEM-01/B	lesson	English	8	1	1 st	YES	optional	Intercurricular
ICE CORE SCIENCE	GEOS-03/A	lesson	English	8	1	1 st	YES	optional	Intercurricular
ADVANCED TECHNIQUES FOR SAMPLE PREPARATION	CHEM-01/A	lesson	English	16	2	1 st	YES	optional	Intercurricular
SCANNING AND TRANSMISSION ELECTRON MICROSCOPY, PRINCIPLES AND APPLICATIONS	GEOS-01/A	lesson	English	28	3	1 st	YES	optional	Intercurricular
RAMAN SPECTROSCOPY: A FLEXIBLE TOOL FOR AN INTEGRATED RESEARCH APPROACH	GEOS-02/B	lesson	English	16	2	1 st	YES	optional	Intercurricular
SCANNING MICROSCOPY AND SPECTROSCOPY: PRINCIPLES, APPLICATIONS, IMAGE HANDLING	PHYS-03/A	lesson	English	20	2	1 st	YES	optional	Intercurricular
ISOTOPES AS ENVIRONMENTAL TRACERS	BIOS-05/A	lesson	English	20	2	1 st	YES	optional	Intercurricular
FROM ENVIRONMENTAL MONITORING TO HUMAN HEALTH: EFFECTS OF CONTAMINANTS, TOOLS AND MODELS	BIOS-04/A	lesson	English	18	2	1 st	YES	optional	Intercurricular
NATURAL CAPITAL, ECOSYSTEM SERVICES AND NATURE-BASED SOLUTIONS	BIOS-01/A	lesson	English	26	3	1 st	YES	optional	Intercurricular
NEW LIGNIN-BASED SUSTAINABLE MATERIALS: SCIENCE AND TECHNOLOGICAL ASPECTS	CHEM-05/A	lesson	English	8	1	1 st	YES	optional	Intercurricular
ECOLOGICAL BASELINE AND CONSERVATION PALEOBIOLOGY	GEOS-02/A	lesson	English	16	2	1 st	YES	optional	Intercurricular
CARBON AND NOBLE GASES SYSTEMATICS IN THE EARTH'S INTERIOR	GEOS-01/C	lesson	English	8	1	1 st	YES	optional	Intercurricular
MACHINE LEARNING FOR MULTIVARIATE DATA ANALYSIS	CHEM-01/A	lesson	English	20	2	1 st	YES	optional	Intercurricular
MONTE CARLO APPROACH TO SCIENTIFIC DATA ANALYSIS: AN INTRODUCTION	GEOS-04/B	lesson	English	20	2	1 st	YES	optional	Intercurricular
OPEN-SOURCE SOFTWARE FOR SPATIAL DATA ANALYSIS	GEOS-03/A	lesson	English	16	2	1 st	YES	optional	Intercurricular
SPATIAL VARIABILITY OF ENVIRONMENTAL CHARACTERISTICS AND MAPPING METHODOLOGIES	AGRI-06/C	lesson	English	16	2	1 st	YES	optional	Intercurricular
TIME SERIES ANALYSIS OF ENVIRONMENTAL DATA	GEOS-03/B	lesson	English	20	2	1 st	YES	optional	Intercurricular
UAV/ROV AND IMMERSIVE VIRTUAL REALITY FOR RESEARCH IN EARTH SCIENCES	GEOS-02/C	lesson	English	18	2	1 st	YES	optional	Intercurricular
CHALLENGES AND TOOLS IN CHEMICAL SCIENCES	CHEM-01/A	lesson (seminar)	English	8	1	1 st	YES	mandatory	Chemical Sciences
NMR SPECTROSCOPY APPLICATIONS TO LIGAND-RECEPTOR STUDIES	CHEM-05/A	lesson	English	20	2	1 st	YES	optional	
INTRODUCTION TO PHOTOCHEMISTRY	CHEM-02/A	lesson	English	24	3	1 st	YES	optional	Chemical Sciences
ENHANCEMENT OF FRAGILE CULTURAL HERITAGE	CHEM-01/B	lesson	English	20	2	1 st	YES	optional	Chemical Sciences

CHALLENGES AND TOOLS IN GEOLOGICAL SCIENCES	GEOS-02/A	lesson (seminar)	English	8	1	1 st	YES	mandatory	Geological Sciences
ADVANCED NUMERICAL MODELING TOWARDS DIGITAL TWINS FOR GEOMATERIALS	GEOS-03/B	lesson	English	36	3	1 st	YES	optional	Geological Sciences
INTRODUCTION TO GEODYNAMIC AND LANDSCAPE EVOLUTION NUMERICAL MODELING	GEOS-04/A	lesson	English	20	2	1 st	YES	optional	Geological Sciences
CHALLENGES AND TOOLS IN ENVIRONMENTAL SCIENCES	BIOS-05/A	lesson (seminar)	English	8	1	1 st	YES	mandatory	Environmental Sciences
Total hrs/credits				462	51				