

CHEMICAL, GEOLOGICAL AND ENVIRONMENTAL SCIENCES

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
SUSTAINABLE CHEMICAL PROCESSING TECHNOLOGIES	CHEM-03/A	lesson	English	16	2	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
CARBON AND NOBLE GASES SYSTEMATICS IN THE EARTH'S INTERIOR	GEOS-01/C	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
MACHINE LEARNING FOR MULTIVARIATE DATA ANALYSIS	CHEM-01/A	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
NMR SPECTROSCOPY APPLICATIONS TO LIGAND-RECEPTOR STUDIES	CHEM-05/A	lesson	English	20	2	1 st	yes	optional	Chemical Sciences
COMPUTATIONAL APPROACHES FOR STRUCTURE-BASED DRUG DESIGN	CHEM-02/A	lesson	English	16	2	1 st	yes	optional	Chemical Sciences
CRYSTALLOGRAPHY AND LABORATORY OF X-RAY POWDER DIFFRACTION	CHEM-02/A	lesson	English	20	2	1 st	yes	optional	Chemical Sciences
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
DETRITAL GEOCHRONOLOGY AND THERMOCHRONOLOGY	GEOS-02/B	lesson	English	16	2	1 st	yes	optional	Geological Sciences
PROVENANCE ANALYSIS: HOW TO INTEGRATE SINGLE GRAIN AND BULK TECHNIQUES	GEOS-02/B	lesson	English	16	2	1 st	yes	optional	Geological Sciences

MONTE CARLO APPROACH TO GEOPHYSICAL INVERSE PROBLEM: AN INTRODUCTION	GEOS-04/B	lesson	English	20	2	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
ADVANCED NUMERICAL MODELING TOWARDS DIGITAL TWINS FOR GEOMATERIALS	GEOS-03/B	laboratory	English	36	3	1 st	yes	optional	Geological Sciences
ADVANCED FIELD AND REMOTE-SENSED CHARACTERIZATION OF ROCK FRACTURES IN OUTCROPS	GEOS-02/C	lesson	English	18	2	1 st	yes	optional	Geological Sciences
NON-ANIMAL TESTING AND RESEARCH: ETHICAL ISSUES AND SCIENTIFIC APPLICATIONS	BIOS-04/A	lesson	English	8	1	1 st	yes	optional	Environmental Sciences
NEXT GENERATION SEQUENCING AND BIOINFORMATIC TOOLS FOR ECOLOGICAL STUDIES	BIOS-15/A	lesson	English	20	2	1 st	yes	optional	Environmental Sciences
ECOSYSTEM SERVICES	BIOS-05/A	lesson	English	16	2	1 st	yes	optional	Environmental Sciences
ISOTOPES AS ENVIRONMENTAL TRACERS	BIOS-05/A	lesson	English	20	2	1 st	yes	optional	Environmental Sciences
NATIVE PLANT ASSEMBLAGES TO RESTORE DEGRADED LANDS	BIOS-01/A	lesson	English	8	1	1 st	yes	optional	Environmental Sciences
ACOUSTICS APPLIED TO THE ENVIRONMENT: SOUNDSCAPE AS ENVIRONMENTAL QUALITY INDEX	PHYS-06/A	laboratory	English	12	1	1 st	yes	optional	Environmental Sciences
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