

COURSE TITLE	ISOTOPIC GEOCHRONOLOGY	CODE: GC 4104
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LEVEL (UG-undergraduate/M-master) AND YEAR OF STUDY (1,2,3,4)	M1	SEMESTER	I	STATUS (CO-COMPULSORY/OP-OPTIONAL)	OP
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NUMBER OF HOURS/ WEEK				TOTAL HOURS/ SEMESTER	TOTAL HOURS OF INDIVIDUAL WORK	CREDITS	EVALUATION TYPE (D-DURING THE SEMESTER, C-COLLOQUIUM, E-EXAM, M- MIXT)	LANGUAGE
L	S	P	Pr.					
1		1		28	152	6	D, E	English

LECTURER	POSITION, NAME AND SURNAME	DEPARTMENT
	PhD Reader Maricel Răileanu	Geology

PREREQUISITES	Petrology; Mineralogy; Global tectonic
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OBJECTIVES	Students' acquisition of the most important isotope systems and equations used in geochronology.
COURSE CONTENTS	General notions about isotopic geochronology. Principles of geochronology. The K-Ar system. The Rb-Sr system. The Sm-Nd system. The Re-Os system. The Lu-Hf system. The U-Th-Pb system.
PRACTICAL	Setting out and interpreting isochrons. Setting out and interpreting Sm-Nd isochrons U-Pb dating and setting out <i>concordia</i> diagrams. Applications of geochronological methods on sedimentary, magmatic and metamorphic rocks.
TEACHING METHODS	Power point presentations of lectures.

RECOMMENDED READING	Dickin, A. P. (1995). Radiogenic Isotope Geology. Cambridge University Press. Faure, G. (1986). Principles of Isotope Geology. John Wiley & Sons. Onac, P.B. (2004). Clepsidrele geologiei. Ed. Presa Univ. Clujeană, Cluj-Napoca. Văсарu, Gh., Cosma, C. (1998). Metode de datare prin fenomene nucleare naturale. Ed. Dacia, Cluj-Napoca.
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ASSESSMENT METHODS	Conditions	Fulfilling professional obligations (training and practical work)
	Criteria	Cumulative assessment
	Way of evaluation	Preliminary examination + final written examination
	Formula of the final mark	0.50 D + 0.50 E