

Course Information Sheet

University: <i>Comenius University Bratislava</i>					
Faculty: <i>Faculty of Natural Sciences</i>					
Course ID: <i>PriF.KIHG/N-mGIH-152/22</i>			Course title: <i>Methods of Hydrogeological Research and Survey</i>		
Type, scope, and method of learning activities:					
Form of study: <i>lecture and practical lectures</i>					
Number of contact hours: <i>2 hours lecture and 2 hours practical lectures per week</i>					
Per week: <i>4 hours</i> per level/semester: <i>52 hours</i>					
Method of Study: <i>full-time learning</i>					
Credits: <i>5</i>					
Recommended semester: <i>1st. semester</i>					
Educational level: <i>II.</i>					
Required prerequisites: <i>-</i>					
Grading Policy (Assessment/Evaluation): <i>Grades will be based on a practical assignment (40 points), a final written test (30 points) and an oral exam (30 points). The course has a standardized grading system, as follows: A: 100 - 93%, B: 92 - 85%, C: 84 - 77%, D: 76 - 69%, E: 68 - 60%. Achieving less than 60% of one or both parts of the evaluation mean a summary evaluation of Fx and the credits will not be assigned to a student.</i>					
Learning outcomes: <i>The course will equip the student with knowledge of groundwater hydraulics, specifically focused on the evaluation of hydrodynamic tests. They will gain practical experience in conducting and evaluating hydrodynamic tests and understand the nature of individual measurements. In addition, they will acquire a comprehensive understanding of how groundwater reserves are determined in accordance with the current legislation on geological law. The course will also cover the requirements for the content and preparation of the final report in compliance with the geological law. The student will gain insights into the fundamentals of numerical modeling, specifically for the purposes of hydrogeology.</i>					
Syllabus: <i>Course introduction - aim, sequence, method selection, evaluation. Basics of groundwater hydraulic. Preparation and implementation of hydrodynamic tests, specification of measuring and pumping equipment, types of measurements, method of data acquisition and processing. Interpretation of hydrodynamic tests for various types of aquifers and boundary conditions. Calculation of pumped volume of groundwater, determination of the impact of boundary conditions. Categories and requirements for determining exploitation amount of groundwater according to the legislation in force. Content of the final report for hydrogeological survey, delivery of results of hydrogeological work. Principles of numerical modelling, practical examples for the needs of hydrogeological survey. Methods of evaluating hydrological and hydrogeological drought.</i>					
Recommended literature: <i>Mucha, I., Šestakov, V.M. 1987: Hydraulika podzemných vôd. ALFA, Bratislava, SNTL, Praha. Jetel, J. 1982: Určování hydraulických parametrů hornin hydrodynamickými zkouškami ve vrtech. ČAV. Melioris et al. 1986: Podzemná voda - metódy výskumu a prieskumu. ALFA, Bratislava. Zákon č. 569/2007 Z. z. o geologických prácach (geologický zákon). Vyhláška 51/2008 Z. z., ktorou sa vykonáva geologický zákon.</i>					
Languages required to complete course: <i>English</i>					
Notes: <i>-</i>					
Grading History:					
Total number of evaluated students: <i>the real number of evaluated students is reported from the introduction of the course up to its latest update</i>					
A	B	C	D	E	FX
a	b	c	d	e	f
Lecturers:					
<i>Assoc. Prof. RNDr. David Krčmář, Ph.D., Martin Zatlakovič, Ph.D., RNDr. Kamila Hodasová, Ph.D.</i>					
Last change: <i>24. April 2023</i>					
Approved by: <i>prof. RNDr. Martin Bednarik, Ph.D.</i>					

