



## **BASIC CONCEPTS OF GEOLOGY**

Faculty of Earth Science & Engineering, Petroleum Engineering

### COMMUNICATION DOSSIER ON THE SUBJECT

University of Miskolc

Faculty of Earth Science & Engineering

Institute of Mineralogy and Geology

2020/21 Academic Year, 1<sup>st</sup> semester

## 1 COURSE DESCRIPTION

<p><b>Course Title:</b> Basic Concepts of Geology  <b>Instructor:</b> Dr. Éva Hartai, Honorary Professor</p>	<p><b>Code:</b> MFFTT250  Responsible department/institute: Institute of Mineralogy and Geology</p>																				
	<p><b>Subject element: K</b></p>																				
<p><b>Position in curriculum (which semester):</b> 1</p>	<p><b>Pre-requisites (if any):</b> -</p>																				
<p><b>No. of contact hours per week (lecture + seminar):</b> 2 (lecture)</p>	<p><b>Type of Assessment (examination/practical mark / other):</b> examination</p>																				
<p><b>Credits:</b> 2</p>	<p><b>Course:</b> full time</p>																				
<p><b>Course Description:</b>  Formation of the Universe, the solar System and the Earth. Inner structure of the Earth. Origin of the plate tectonic theory, principles of plate tectonics. Magmatic rock forming processes. Sedimentary rock forming processes. Metamorphic rock forming processes. Principles of structural geology. Short review of the Earth and life history. Formation of metallic and non-metallic mineral deposits and fossil fuels.  Competencies to evolve:  Knowledge: T2, T3, T6, T7, T8, T11  Ability: K4, K5, K6, K7, K8, K9, K10, K11  Attitude: A1, A2, A3, A4, A5, A7  Autonomy and responsibility: F1, F2, F4, F6, F7</p>																					
<p><b>Assessment and grading:</b>  Students will be assessed with using the following elements.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Attendance:</td> <td style="text-align: right;">5 %</td> </tr> <tr> <td>Student presentation</td> <td style="text-align: right;">10 %</td> </tr> <tr> <td>Final exam</td> <td style="text-align: right;">85 %</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">100%</td> </tr> </table> <p>Grading scale:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">% value</th> <th style="text-align: left;">Grade</th> </tr> </thead> <tbody> <tr> <td>85 -100%</td> <td>5 (excellent)</td> </tr> <tr> <td>60 – 85%</td> <td>4 (good)</td> </tr> <tr> <td>55 - 60%</td> <td>3 (satisfactory)</td> </tr> <tr> <td>40 - 55%</td> <td>2 (pass)</td> </tr> <tr> <td>0 - 40%</td> <td>1 (failed)</td> </tr> </tbody> </table>		Attendance:	5 %	Student presentation	10 %	Final exam	85 %	Total	100%	% value	Grade	85 -100%	5 (excellent)	60 – 85%	4 (good)	55 - 60%	3 (satisfactory)	40 - 55%	2 (pass)	0 - 40%	1 (failed)
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<p><b>Compulsory or recommended literature resources:</b></p> <ul style="list-style-type: none"> <li>• David Rothery: Geology – a complete introduction. McGraw-Hill Companies, 2015. ISBN-13: 978-1473601550</li> <li>• Edward J. Tarbuck, Frederick K. Lutgens &amp; Dennis G. Tasa: Earth Science. ISBN-13: 978-0134543536</li> <li>• John D. Morris: The Geology Book (Wonders of Creation) Master Books, 2007, ISBN-10: 0890512817</li> </ul>																					

## 2 CURRICULUM

### Basic Concepts of Geology

2020/21 Academic Year, 1<sup>st</sup> semester

Timing of lectures: Wednesday, 10:00-12:00

Date	Theme of lecture
2020-09-16	Formation of the Universe, the solar System and the Earth.
2020-09-23	Inner structure of the Earth
2020-09-30	Origin of the plate tectonic theory. Principles of plate tectonics
2020-10-07	Magmatic rock forming processes
2020-10-14	Sedimentary rock forming processes
2020-10-21	Metamorphic rock forming processes.
2020-10-28	Principles of structural geology
2020-11-04	Earth and life history – Precambrian. Earth and life history - Phanerozoic
2020-11-11	Formation of ore deposits
2020-11-18	Formation of non-metallic deposits
2020-11-25	Formation of fossil fuels
2020-12-02	Presentations by students
2020-12-09	Presentations by students

## 3 EXAM DETAILS

Students have to demonstrate sufficient knowledge in form of oral exam. The course leader asks short question covering all topics discussed during the semester, and short answers are expected from the students. The exam results contribute to the final assessment of the students with 85%.

Miskolc, 07.09.2020

Dr. Éva Hartai  
Honorary Professor