

Course unit code	11313
Course unit title	INTRODUCTION TO ENVIRONMENTAL GEOCHEMISTRY AND GEOCHEMICAL MAPPING
Name and title of lecturer	Donatas Kaminskas, dr., prof. assoc.
Department, Center	Department of Geology and Mineralogy
Faculty	Faculty of Natural Sciences
Level of course	
Semester	Autum
ECTS credits	<u>5</u>
VU credits	<u>5</u>
	total <u>32</u>
	Lectures: <u>32</u>
	Seminars:
	Classes
	Laboratory work
	Consultations
Prerequisites	Desirable: Basics in Geology and Geochemistry
Language of instruction	english
Objectives and learning outcomes	<i>Students will learn to apply theoretical essentials of geochemistry and geology for both natural and “technogenic” environment evaluation as well as obtain basic skills on geochemical mapping at various geochemical mapping scales</i>
Course unit content	<p>Main topics:</p> <p>Regularities of natural and man-made distribution of chemical elements;</p> <p>Sampling, sampling media and sample preparation;</p> <p>Brief summary of modern analytical techniques in geochemistry;</p> <p>Introduction to geochemical data statistical analysis;</p> <p>Methodology of geochemical mapping: regional and local scales;</p> <p>Geochemical mapping in Lithuania.</p>
Reading list	<p>Albarede F., 2003. Geochemistry (An Introduction). Cambridge university press. 248 p.</p> <p>Faure G., 1998. Principles and applications of geochemistry (2nd Editon). Prentice Hall. 600 p.</p> <p>Gill R. (ed.) 2002. Modern Analytical Geochemistry. An introduction to Quantative Chemical Analysis Techniques for Earth, Environmental and Material Scientists. Pearson Education. 330 p.</p> <p>Tucker M., ed. 1985. Techniques in Sedimentology. Blackwell Scientific publications. London. 394 p.</p> <p>Rollinson H., 1995. Using geochemical data: evaluation, presentation, interpretation. Longman Ltd. 352 p.</p>

Additional Reading List	Geochemical Atlas of Lithuania Geologija (journal) Geochemical atlas of Panevezys county ON-line: William M. White "Geochemistry " (http://www.imwa.info/Geochemie/Chapters.HTML)
Teaching methods	<i>Lectures, discussions</i>
Attendance requirements	<i>Attendance not required</i>
Assessment requirements	<i>Written- oral examination</i>
Assessment methods	<i>evaluated using grading scale from 1(very poor) to 10(excellent)</i>
Approved by the Department	
Approved by the Committee of the Study Programme	