

Course Name *Mineralogy of anthropogenic components*

Course Overview

Level of study	<i>Bachelor Degree</i>
Workload	ECTS: 2 Total Hours: 44 Contact Hours: 20 <ul style="list-style-type: none"> • Lectures: 10 • Labs: 10
Course Code	
Semester	<i>Winter</i>
Prerequisites	<i>ecology, chemistry, geoecology, methods of research material composition of natural objects, mineralogy</i>
Course Objectives	<i>to get knowledge about anthropogenic processes influenced on minerals formation and approaches of environmental mineralogy for environment impact assessment within urban areas</i>
Learning Outcomes	<i>Having successfully completed this module, you will:</i> <i>know:</i> <ul style="list-style-type: none"> • <i>the terminology relating to mineralogy of techno genesis and environmental mineralogy,</i> • <i>analytical support used to determine of anthropogenic components composition in waste products, soil and snow,</i> • <i>processes of mineral and anthropogenic formation during mineral output, coal combustion, oil production as well as processes in tailings and mine dumps</i> • <i>types of mineral and non-mineral phases of solid airborne particles deposited and soil,</i> <i>get practical skills:</i> <ul style="list-style-type: none"> • <i>in identifying mineral and non-mineral phases, their origin in snow and soil</i>
Syllabus	<i>Lectures:</i> <ol style="list-style-type: none"> 1. <i>Theme 1. Introduction. Principal concept of environmental mineralogy and mineralogy of techno genesis.</i> 2. <i>Theme 2. Anthropogenic components in snow and soil within urban areas.</i> 3. <i>Theme 3. Processes of mineral and anthropogenic formation during high temperatures techno genesis</i> 4. <i>Theme 4. Processes of mineral and anthropogenic formation in tailings and mine dumps.</i> 5. <i>Theme 5. Processes of mineral and anthropogenic formation during oil production.</i>
Labs	<ol style="list-style-type: none"> 1. <i>Study of anthropogenic components types.</i> 2. <i>Characterization of solid airborne particles deposited in snow.</i> 3. <i>Characterization of anthropogenic components in soil.</i>
Projects	

Assessment	<i>Credit Test</i>
Resources	<i>Yazikov E.G., Talovskaya A.V., Zhornyak L.V. Mineralogy of anthropogenic components – coursebook. Tomsk: TPU publishing house, 2011. – 264 p. (in Russian)</i>
Instructors	<i>Anna Talovskaya, associate professor, PhD</i>