







	lesson	cryogenic soils. Soil classification (WRB, 2014). Impact of permafrost on soil, there is a difference between north taiga and middle taiga subzones. Degradation of permafrost can be seen from changes of permafrost-gley horizon and area of melting spots. Self-studying according to topic.	
6	Practical lesson	Intensive forest ground fires as a factor of increasing the depth of the seasonally thawed layer. Influence of permafrost on the accumulation of pollutants in cryogenic soils. Self-studying according to topic.	Irina Borisova

## Course assignments

At each seminar students make personal class assignments (50% of score), home assignments and current assessment (20% of score). The final examination will be given at the end of the course (30% of score).

## Literature

- L.S. Shirokova, O.S. Pokrovsky, S.N. Kirpotin, C. Desmukh Biogeochemistry of organic carbon, CO<sub>2</sub>, CH<sub>4</sub>, and trace elements in thermokarst water bodies in discontinuous permafrost zones of Western Siberia // *Biogeochemistry*. 2013. May, 2013. Vol. 113. P. 573-593.  
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- Likens, G.E. and F.N. Borman. 1995. *Biogeochemistry of a Forested Ecosystem*. 2<sup>nd</sup> ed. Springer-Verlag, New York. <http://www.springerlink.com>
- Oliva M., Fritz M. Permafrost degradation on a warmer Earth: Challenges and perspectives // *ELSEVIER*. Vol. 5. October, 2018. P. 14-18. <http://www.sciencedirect.com>
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