TOMSK POLYTECHNIC UNIVERSITY ТОМСКИЙ ПОЛИТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ

Course Name *Professional English*

Course Overview

Level of study	*Master Degree*
Workload	**ECTS:** *3* **Total Hours: 76** **Contact Hours: 32** • **Lectures: 16** • **Labs: 16**
Course Code	
Semester	*Winter*
Prerequisites	*English*
Course Objectives	*is to give knowledge of atmospheric aerosols in environment.*
Learning Outcomes	*Students should:* *- define main terms* *- use correctly the terms* *- be able to discuss why aerosols is important to study* *- know procedure of aerosol collection* *- know methods of aerosol composition study* *- be able to interpret the results, obtained from aerosol composition stud*
Syllabus	*Introduction in the course* *1. Basic concept of atmospheric aerosols system* *2. Anthropogenic aerosol* *3. Methods of aerosol study.* *4. International programs to study of aerosol.* *5. Contamination monitoring of snow cover.* *6. Mineral and anthropogenic particles in aerosols.* *7. Elemental composition of dust aerosols (by the example of Tomsk city)*
Labs	*1. Terminology relating to atmospheric aerosols* *2. Aerosol classification* *3. Size of atmospheric particles. Health effects of atmospheric particles* *4. Video task Aerosols and climate change* *5. Study of substantial composition of insoluble particles of snow by schlich analysis* *6. Study of substantial composition of insoluble particles of snow by scanning electron microscopy method* *7. Geochemical particularities of insoluble phase of snow* *8. Modes of radioactive elements occurrence in insoluble phase of snow by fission radiography (f-radiography) method*
Projects	
Assessment	*Credit test*
Resources	*Kondratyev K.Ya., Ivlev L.S., Krapivin V.F., Vatotsos C.A. Atmospheric aerosol properties: formation, processes and impacts – Springer, 2006.* *Levin Z., Cotton W.R. et. All. Aerosol pollution: impacts on precipitation – Springer, 2009* *Yazikov E.G., Talovskaya A.V., Nadeina L.V. Geoecological environmental monitoring: coursebook. − Tomsk: TPU publishing house, 2013. – 135 p.*
Instructors	*Anna Talovskaya, associate professor, PhD*