# UNIVERSITY OF PANNONIA

## COURSE DATASHEET

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| **Semester:** | 2014/15/1 |
| **Course:** | Chemistry and application of lubricants |
| **Code:** | VEMKOLM212K |
| **Responsible department:** | Department of Hydrocarbon and Coal Processing |
| **Department code:** | MKOL |
| **Responsible instructor:** | György Pölczmann |

**Course objectives:**

Introduction to the knowledge of lubricant research, development, production and application

**Course content:**

1. Introduction to lubricant technology. Bases of tribology. Determination of optimal lubrication parameters.
2. Classification of lubricants. Properties and analytics of lubricants.
3. Lubricant production in general. Base oil production from crude oil.
4. Synthetic lubricants. Type of synthetic base oils.
5. Base oils from other sources. Blending of base oils.
6. Additives, production and application.
7. Additive production processes. Selection of additive type.
8. Additive compositions. Properties, production processes and types of lubricant compositions.
9. Determination of requirements of lubricant composition.
10. Physico-chemical properties of additive types.
11. Production of lubricant oils, analytics. Classification of engine oils and gear oils based on viscosity and performance.
12. Lubricant greases.
13. Special lubricants. Industrial lubricants.
14. Attrition, regeneration and reuse of lubricants.
15. Marketing activity in the field of lubricants. Properties of lubricant market. Lubricant development and the future.

**Requirements, evaluation and grading:**

The attendance of the classes are recommended, missing the classes are judged by the TVSz

**Required and recommended readings:**