



COURSE DATASHEET

Semester:	2016/17/1
Course:	Optimization in petroleum industry
Code:	VEMKOLB1140
Responsible department:	Department of Hydrocarbon and Coal Processing
Department code:	MKOL
Responsible instructor:	Kornél Csernik

Course objectives:

Presentation of the optimization of whole value chain of the hydrocarbon industry (crude oil supply, crude processing, product marketing), of the maximization of the company profit, and the maximal utilization of the assets and process units (practical oriented education).

Course content:

- Short history of oil industry, technological development
- Supply chain management: theory and practice in the oil industry
- Tools of optimization (PIMS program)
- Planning of supply chain in different time frames
- Purpose role and specialities of scheduling
- The role of refining in the supply chain
- The role of logistics in the supply chain
- Role and goals of commerce in the supply chain
- Petrochemicals
- Examination of different cases with optimization software
- Optimization in practice (simplified calculation task)
- Long term developments and market strategies in dependence on optimization
- Human factor as the key element of optimisation
- Big investments in the MOL Group
- Future of the oil industry
- Summary



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Requirements, evaluation and grading:

Attending of the lectures is compulsory.

Sending two essays on time and participation on the exercises

Evaluation: 30% on the base of essays 70% exam

Required and recommended readings:

- J. H. Gary, G. E. Handwerk, M. J. Kaiser: Petroleum Refining Technology and Economics, CRC Press, New York, 2007. - Peters & Timmerhaus: Product and Process Design Principles, McGraw-Hill Handbook, New York, 2003. - Jones, T.C.: Diesel Plant Operations Handbook, McGraw-Hill Inc., N.Y., 1991. - Mc Ketta, J.: Petroleum Processing Handbook, Marcell Dekker, 1992. - Meyers, R.A.: Handbook of petroleum Refining Processes, McGraw-Hill Inc., N.Y., Toronto, 1996. - Speight, J.G.: Petroleum Chemistry and Refining, Taylor and Francis 1998.