



## SUBJECT DATASHEET

<b>Semester:</b>	2010/11/1
<b>Subject:</b>	Selected chemical technologies
<b>Code:</b>	VEMKTEB143A
<b>Responsible department:</b>	Department of Hydrocarbon and Coal Processing
<b>Responsible department code:</b>	MKOL
<b>Responsible lecturer:</b>	Dr. Jenő Hancsók

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### Educational objectives:

### Detailed content of the subject:

- 1-2. About the chemical technologies
- 3-4. Hydrogenation processes in the crude oil refining: Hydrodesulphurization of fuels, hydrocracking.
- 5-6. Processes in the silicate industry: raw materials, technologies, products.
- 7-8. Inorganic chemical processes: decomposition of natural gas
- 9-10. Radiochemical processes: contamination, decontamination
- 11-12. Fine chemicals technologies: adsorption equilibrium and kinetics, elution, frontal, displacement adsorption with preparative HPLC
- 13-14. Organic chemical processes: summary of selected organic chemical processes
15. Examination, Safety instructions in laboratory practice

### Requirements:

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Examination paper.

Examples of Examination Questions are in annex. (<50% =1; >85%=5)

Possibilities for repeating the subject:

### Required and suggested references:

Kötelező és ajánlott irodalom: Wiisermel, K., Appe, H.J.: Ipari szerves kémia, Nemzeti Tankönyvkiadó, Budapest, 2003. Hancsók, Jenő.: Korszerű motor- és sugárhajtómű üzemanyagok II. Dízelgázolajok, tankönyv, Veszprémi Egyetemi Kiadó 1999. Hancsók Jenő, Kasza Tamás: „Katalitikus hidrogénező eljárások a kőolajiparban”, Oktatási segédlet, Veszprém, 2010. Törös, Sz.: Az előadó által összeválogatott és a hallgatók részére az interneten hozzáférhető oktatási segédletek. Magyar Kémikusok Lapja következő számai: 2005/6-12, 2006/1-12, 2007/1-7 Gary, J.H.: Petroleum Refining Technology and Economics 3rd, Marcel Dekker, N.Y. 1999. Speight, J.G.: The chemistry and technology of petroleum 3rd. Marcell Dekker, 1998. Speight, J.G.: Petroleum Chemistry and Refining, Taylor and Francis 1998. Sequeira, A.: Lubricant base oil and wax processing, Marcell Dekker, 1994. Wiisermel, K., Arpe, H.-J.: Ipari szerves kémia, Nemzeti Tankönyvkiadó,



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Budapest, 1993. Mc Ketta, J.: Petroleum Processing Handbook, Marcell Dekker, 1992. Hobson, G.D.: Modern Petroleum Technology, J. Wiley, 1986. Chauvel, A., Lefebvre, G.: Petrochemical processes I-II., 1989. Fahey, D.R.: Industrial Chemicals via C1 Processes, A.C.S., 1986. Wiseman, P.: Petrochemicals, John Wiley, N.Y., 1986. Meyers, R.A.: Handbook of petroleum Refining Processes, McGraw-Hill Inc., N.Y., Toronto, 1996. Chauvel, A., Lefebvre, G.: Petrochemical processes I-II. Gulf. 1989. Krevelen, D.W. Van.: Properties of polymers, Elsevier, Amsterdam, ..., Tokyo, 1990. Fourné, F.: Synthetic Fibers, Hanser Publishers, Munich 1999. Gunardson, H.: Industrial Gases in Petrochemical processing, Marcel Dekker Inc., 1998. Scheirs, J., Kaminsky, W.: Metallocen based Polyolefins, preparation, properties and technology Vol. I, John Wiley and Sons, Ltd., 2000. Olah, G.A., Molnár, Á.: Hydrocarbon chemistry, John Wiley and Sons, Inc., 1995.