UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2014/15/2
Course:	Environmental Organic Chemistry
Code:	VEMKOKM112K
Responsible department:	Department of Organic Chemistry
Department code:	MKOK
Responsible instructor:	Dr. Szilárd Tőrös

Course objectives:

The students will be capable to identify the organic chemical pollutions, potential environmental hazards, assessing the environmental damage prevention.

Course content:

The reasons of chemophobia, the consequences o fit and its appearance in the society. The change of approaches in education, in research and in realization of practise. The 12 principles of the sustainable development of the chemical industry. Environmental quotient and atom efficiency. Types of environmentally sound organic chemical reactions. Examples: synthesis of adipic acid, hydrolysis of fats and vegetable oils. Ionic liquids as environmentally sound solvents. Microbiological degradation of some typical organic impurities. Specially dangerous substances: Hard drugs, poisons, explosives, chemical weapons Chemical catastrophes and its edifications.

Requirements, evaluation and grading:

Written test.

Required and recommended readings:

P. T. Anastas, J. C. Warner: Green Chemistry: Theory and Practice, Oxford University Press, Oxford, 1998. Beck Mihály: A kémia és társadalom, Magyar Tudomány, 2002 (12) 1636. Tungler Antal: Zöld kémia és környezeti katalízis, BME, 2005. Barótfi István: Környezettechnika, Mezőgazda Kiadó, Budapest, 2003. (Kempelen Farkas Digitális Tankönyvtár). Réti Tamás, Tungler Antal, Tőrös Szilárd: Ipari technológiák és szennyezéseik, digitális tankönyv, HEFOP 3.3.1.-P-2004-09-0152, (2007). P. T. Anastas, M. M. Kirchoff: Acc. Chem. Res. 2002 (35) 686.