UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2016/17/1
Course:	Optimization of Industrial Technologies
Code:	VEMKKVM112O
Responsible department:	Department of Environmental Engineering
Department code:	MKKV
Responsible instructor:	Viola Somogyi

Course objectives:

The course will review and summarize the practical knowledge which refer to the optimization of whole value chain of the industrial production. To maximize the profit of industrial technology and efficient use to available means.

Course content:

1. Input information for process design. Selection criteria of the operating mode.
2. Input-output structure of the technological processes. Function of the recirculation.
3. Synthesis of separation system.
4. The technological process renovation alternatives, economical and technical efforts.
5. Calculation of material and energy streams. Correlation to the values of technological process parameters. Calculation of the efficiency of chemical transformation.
6. Case study: Complett energy integration of technological process.
7. Integration of heat exchange in practice.
8. Case study: Calculation of the material and energy streams of complett classical chemical technology. Alternatives for waste minimisation.
9. Case study: Calculation of the material and energy streams of complett petroleum technology. Alternatives for waste minimisation.
10. Case study: Calculation of the material and energy streams of complett food technology. Alternatives for waste minimisation.

Requirements, evaluation and grading:

Students must write one paper in a semester, during the semester. The final mark based on the simple sum of the points obtained for the mid-semester exam or the written exam and for the teamwork. The mark of the mid-semester paper is strictly required to be at least 2.

Required and recommended readings: