

# **UNIVERSITY OF PANNONIA**

## **COURSE DATASHEET**

| Semester:               | 2015/16/1                               |
|-------------------------|---|
| Course:                 | Safety Technics and Risk Assessment II. |
| Code:                   | VEMKKVM422B                             |
| Responsible department: | Department of Environmental Engineering |
| Department code:        | MKKV                                    |
| Responsible instructor: | Róbert Kurdi                            |

#### Course objectives:

In-depth knowledge in the practical solutions of risk analysis and control, introducing risk management.

### Course content:

- 1. Calculating statistical data in order to handle work-related accidents and ill health.
- 2. Treating the intensity distribution of answers to impacts assuming Gauss-distribution.
- 3. Probit method to linearize impact-answer equations (fires, explosions, physical impacts, toxication).
- 4. Judging flammability, explosivity and toxicity of compounds based on their components.
- 5. Calculation of bearable noises.
- 6. Source models of hazardous and polluting materials.
- 7. Transport models of hazardous and polluting materials.
- 8. Classification of processes based on their hazardousness, defining Dow Fire and Explosion Index.
- 9. Hazard and operability analysis.
- 10. Fault tree analysis.
- 11. Quantitative risk assessment.

### Requirements, evaluation and grading:

According to the requirements of fulfillment.

### Required and recommended readings:

Kuhlmann, A.: Einführung in die Sicherheitswissenschaft. Verlag TÜV Rheinland GmbH. Köln, 1995. Haubert G.: A munkahelyi kockázatértékelés és kezelés gyakorlati kézikönyve. MKK. Budapest, 2003. MSZ 28001 és 28002: Munkahelyi egészségvédelmi és biztonsági irányítási rendszerek. MSZT, Budapest, 2003.

Crowl, D. A., Louvar, J. F.: Chemical Process Safety: Fundamentals with Application. Prentice Hall, Englewood Cliffs (N.J.), 1990.



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#### Required and recommended readings:

Varga Z.: Veszélyforrás-elemzés a vegyiparban. Veszprémi Egyetemi Kiadó, Veszprém, 1998. OMIKK: Védekezés ipari katasztrófák ellen. Gyakorlati kézikönyv. OMIKK, Budapest, 1990.