Title of the course: **Risk analysis**	***NEPTUN-code:*** RKXKO1ABNE	***Weekly teaching hours:*** *l+cw+lb* 2+1+0	***Credit*****:** 3 ***Exam type****: e*
Course leader: Sándor Pekker, Dr.	***Position:*** research professor	***Required preliminary knowledge:***	

Curriculum:

Definition and types of risk
The risk-taking
Risk measures
The controllability of risk
Environmental risks and environmental functions of companies
Health Risk Assessment (HRA)
Ecological Risk Assessment (ERA)
The risk of natural hazards, disasters
The environmental risk of toxic elements
Environmental risks in the information society
Special and border areas.

Professional competencies:

Knowledge of general and specific mathematical, natural and social scientific principles, rules, relations, and procedures as required to pursue activities in the special field of environment protection.
In possession of state-of-the-art IT skills, being able to use professional databases and certain design, modelling, and simulation software depending on their specialty.
Knowledge of the learning, knowledge acquisition, and data collection methods of the special fields of environment protection, their ethical limitations and problem solving techniques.
Knowledge of the methodology and legal regulations for performing environmental impact assessments and for compiling impact studies.
Able to perform environmental impact assessments and to participate in compiling impact studies.
Able to perform public administrative and authority tasks related to environment protection after getting acquainted with the duty assigned to them.

Literature:

1. Marvin Rausand: Risk Assessment: Theory, Methods, and Applications (Statistics in Practice), 1st Edition, Wiley, 2011, ISBN-13: 978-0470637647; ISBN-10: 0470637641

2. Thomas Simon: Edition: Fundamentals of Applied Risk Assessment – eBook, Edition: 2; Copyright: 2013 , Kendall Hunt, Pages: 532; ISBN 9781465229373

3. Ian Lerche,Walter Glaesser: Environmental Risk Assessment: Quantitative Measures, Anthropogenic Influences, Human Impact, Springer Science & Business Media, 2007, 343 pages; ISBN: 9783540297093