



COURSE DATASHEET

Semester:	2016/17/1
Course:	Lessons from the nuclear and radiation accidents
Code:	VEMKRKR222S
Responsible department:	Institute of Radiochemistry and Radioecology
Department code:	MKRK
Responsible instructor:	dr. János Somlai

Course objectives:

Analysis of experiences of radiating and nuclear accidents and drawing general lessons

Course content:

Classifying of accidents, fundamental conceptions. Accidents occurred in the beginning. Accidents resulted in medical applications. Accidents resulted in industrial applications. Accidents with recycling metal wastes. Accidents of nuclear researches. Returning of satellites. Accidents of nuclear weapon manufacturing and testing. Classification and prevention of accidents in nuclear power stations. Accidents in military nuclear establishments. Accidents in Windscale and Kysthym. Accidents in peaceful nuclear power plants. Three Mile Island. Accident in the Chernobyl nuclear power plant, experiences, effects and lessons in Hungary. Accidents of storing radioactive wastes. Arrangements for preventing radiating and nuclear accidents. Experiences of arrangements in case of accidents.

Requirements, evaluation and grading:

In the course of an oral examination two overall questions on the issues of the lectures are provided to each student. A short period of time (maximum 30 minutes) is supplied to the students to prepare some drafts of their answers. The exam is qualified in the following ways: - If draft and the answers provided by the student are clear, correct and explains every important relationship on the subject, the record is marked as excellent one (5). - If the student is able to make an overall analysis on the issue solely by the directions of the teacher, he (she) is assessed with a good record (4). - If the student is not able to give clear description on the main relationships of the subject but he (she) can define the fundamental conceptions, his grade is a fair (medium) (3). - If the student can define the fundamental conceptions of the issue by the directions of the teacher, he gets a pass (2). - Without having studied the fundamental conceptions the student is qualified with an unsatisfactory (fail) record (1).

Required and recommended readings:

IAEA: One Decade after Chernobyl. Summing up the Consequences of the Accident. Proc. of the Int.Confer., Vienna, 8-2 April, 1996. Sztanyik B.L. (szerk.): Sugársérülések megelőzése és gyógykezelése. Zrínyi Kiadó, Budapest, 1989.