

<b>Level:</b> PhD				
<b>Course title:</b> Nuclear Energy				
<b>Status:</b> elective				
<b>ECTS:</b> 15				
<b>Requirements:</b>				
<b>Learning objectives</b> To introduce students to the area of nuclear energy.				
<b>Learning outcomes</b> Students are expected to have general knowledge of the theory in nuclear energy and technology of power production. Knowledge should be sufficient to allow students to be involved in practical work in nuclear power plants.				
<b>Syllabus</b> Basic properties of nucleus, nuclear reactions. Heavy nuclei fission mechanism. Interactions of neutrons with matter. Diffusion, moderation and thermalization of neutrons. Nuclear reactor, basic types and nuclear fuel. Dynamic and exploitation of nuclear reactor. Nuclear power station. Thermodynamic processes of nuclear power station. Radiation protection, safety and fuel storage. Thermonuclear processes.				
<b>Weekly teaching load</b>				Other:
Lectures: 6	Exercises:	Other forms of teaching:	Student research: 4	