

Physics of Nuclear Energy**Prof. Waclaw Gudowski****Date: 01.03.2023 – 15.04.2023****Place: room 207, ul. Pasteura 7, Warszawa**

	Date	Time	Subject of the lectures	Lecturer
1	01.03.2023, Wednesday	08:00 - 10:00	From Röntgen to “Tsar Bomba”: Development of Modern Physics leading to Nuclear Energy, part 1	W. Gudowski
2	03.03.2023, Friday	08:00 - 10:00	From Röntgen to “Tsar Bomba”: Development of Modern Physics leading to Nuclear Energy, part 2	W. Gudowski
3	13.03.2023, Monday	08:00 - 10:00	Fear is worse than ghost: Radioactivity, Radioactive Decay, Radiation Protection	W. Gudowski
4	14.03.2023, Tuesday	08:00-10:00	Neutron - Divine (but not God) Particle: Neutron Interactions with Matter. Cross sections	W. Gudowski
5	15.03.2023, Wednesday	08:00-10:00	It’s good to be late, sometimes: Nuclear Fission and Chain Reaction. Prompt and Delayed Neutrons. Nuclear Fusion p1.	W. Gudowski
6	17.03.2023, Friday	08:00-10:00	It’s good to be late, sometimes: Nuclear Fission and Chain Reaction. Prompt and Delayed Neutrons. Nuclear Fusion p2.	W. Gudowski
7	20.03.2023, Monday	08:00-10:00	Rollercoaster physics: slowing down neutrons, why and how to do it and how to simulate it.	W. Gudowski
8	21.03.2023, Tuesday	08:00-10:00	How to make nuclear power safe: reactor kinetics, reactor dynamics - all depends on feedbacks p1.	W. Gudowski
9	22.03.2023, Wednesday	08:00-10:00	How to make nuclear power safe: reactor kinetics, reactor dynamics - all depends on feedbacks p2.	W. Gudowski
10	24.03.2023, Friday	08:00-10:00	Conflict of generations? Generation IV reactors and back to the future.	W. Gudowski
11	27.03.2023, Monday	08:00-10:00	Small is beautiful - Small Modular Reactors, SMRs.	W. Gudowski
12	28.03.2023, Tuesday	08:00-10:00	“Combat of Giants “- Fusion vs fission: principles of fusion and will fusion ever work as an energy source on Earth p1.	W. Gudowski
13	29.03.2023, Wednesday	08:00-10:00	“Combat of Giants “- Fusion vs fission: principles of fusion and will fusion ever work as an energy source on Earth p1.	W. Gudowski
14	14.04.2023, Friday	08:00-10:00	Keeping a Genie in a (magnetic) bottle - Fusion experiments world-wide	W. Gudowski
15	14.04.2023, Friday	10:00-12:00	Now we are done! Summary lecture and how to solve most common problems in energy physics	W. Gudowski