

	<i>Monday (23 July)</i>	<i>Tuesday (24 July)</i>	<i>Wednesday (25 July)</i>	<i>Thursday (26 July)</i>	<i>Friday (27 July)</i>	<i>Saturday (28 July)</i>	<i>Sunday (29 July)</i>
10.00 – 11.15	International Workshop “Capacity Building for Nuclear Industry”	Opening of International Summer School on Radiochemistry	Detection of radioactivity – basic principles, applications in radiation technologies and radioecology	Rosatom lecture	Excursion – research reactor or GMP nuclear medicine lab or accelerator center	Basics of Nuclear Waste management. International regulations	Free day
11.30 – 12.45	Nuclear Industry”	Basics of nuclear chemistry a. Nuclear chemistry – what is it, current trends b. Radiation technologies c. Nuclear medicine – current status and trends Radiation around us	γ – spectrometry	Cross-university collaboration as a “must have” component for the capacity building in the support of the national nuclear program		Basics of Nuclear Waste management. International regulations	
12.45 – 14.00		Lunch break	Lunch break	Lunch break		Lunch break	
14.00 – 15.15		Basics of nuclear chemistry a. Radioactivity – main definitions Types of nuclear decay	α , β - spectrometry	Practical task – detection of radionuclides		Basics of nuclear medicine	
15.30 – 16.45		Basics of nuclear chemistry a. Radioactive equilibrium	Statistics of radioactive decay – data treatment (seminar)	Practical task – detection of radionuclides		Diagnostics in nuclear medicine	
17.00 – 18.15		Basics of nuclear chemistry a. Interaction of radiation with matter	Detection of radioactivity - case studies, seminar	Practical task – detection of radionuclides		Quality control in radionuclide production	

	<i>Monday (30 July)</i>	<i>Tuesday (31 July)</i>	<i>Wednesday (1 August)</i>	<i>Thursday (2 August)</i>	<i>Friday (3 August)</i>
10.00 – 11.15	Nuclear reactions and isotope production – basic principles, production routes	Radionuclide separations for nuclear medicine applications – basics	Radionuclide generators for medical purposes	GMP and establishment of nuclear medicine centers	Excursion – research reactor or GMP nuclear medicine lab or accelerator center
11.30 – 12.45	Nuclear reactors and isotope production method – accelerator vs. reactor methods, isotope generators	Solvent extraction, ion exchange, extraction chromatography	Practical task – isotope generator, labelling, radiochromatography	GMP and establishment of nuclear medicine centers	
12.45 – 14.00	Lunch break	Lunch break	Lunch break	Lunch break	
14.00 – 15.15	Mo-99/Tc-99m applications – production methods, global and local markets	PET radiopharmaceuticals: the major demands to the synthesis methods and QC	Practical task – isotope generator, labelling, radiochromatography	Tests	
15.30 – 16.45	Radionuclides for therapy production	Syntheses methods for clinically relevant PET radiotracers (fluorine-11, carbon-11)	Practical task – isotope generator, labelling, radiochromatography	Discussion of the results of the practical tasks	
17.00 – 18.15	β , α , Auger electron emitters production	Modern automation platforms for the production of PET radiotracers	Practical task – isotope generator, labelling, radiochromatography	Discussion of the tests. Feedback	

The Organizing Committee may introduce changes to ISSR 2018 Program