

Schedule of AMPR Courses in 2017 under the Regional TC Project RER/6/033
Moscow, Russian Federation
(All Courses in Russian Language)

Course Title	Course Dates 2017	Nomination Deadline 2017	Course Objective /Expected Outputs	Selection Criteria
<p>Regional Training Course on High Accuracy Radiotherapy: Technical and Physical Requirements</p>	<p>4-15 September 2017</p>	<p>10 July 2017</p>	<p>The course is to provide theoretical and practical training in technical and medical physics aspects of advanced radiotherapy modalities including intensity modulated radiation therapy (IMRT) and image guided radiotherapy (IGRT).</p> <p>It is expected that the participants will gain in-depth knowledge of imaging and dosimetry used for treatment planning and verification of dose delivery in modern high accuracy radiotherapy, including equipment and methodology, and related QA procedures. The course will use the IAEA material published in Radiation Oncology Physics: a Handbook for Teachers and Students (IAEA 2005); TRS-430 Commissioning and Quality Assurance of Computerized Planning Systems for Radiation Treatment of Cancer (IAEA, 2004); Commissioning of Radiotherapy Treatment Planning Systems: Testing for Typical External Beam Treatment Techniques, TECDOC 1583 (IAEA, 2008), Accuracy Requirements and Uncertainties in Radiotherapy, IAEA Human Health Series No. 31 (IAEA 2016) as well as ICRU 50/60/83 reports.</p> <p>The course will consist of deductive lectures and practical sessions followed by discussions with the course participants. The course programme will include lectures on equipment, procedures and related QA for advanced radiation therapy techniques:</p> <ul style="list-style-type: none"> - Introduction to advanced radiotherapy technologies; - Accuracy requirements and uncertainties in radiotherapy; - Commissioning of high accuracy radiotherapy technology and QA of radiotherapy process; - Imaging in radiation therapy and related QA; - Treatment planning and related QA; - Linac QA: equipment and methods; - IMRT/VMAT: equipment, methods and QA; - IGRT techniques: equipment, methods and QA; adaptive radiotherapy; - Clinical implementation of IGRT; - Patient specific QA for imaging, treatment planning and dose delivery; - SRS, SBRT; - Radiobiology; - Other topics: record & verify systems and their QA, electronic data management (DICOM), contouring, immobilization; portal dosimetry; - Audits of advanced techniques in radiotherapy. <p>Practical sessions will entail:</p> <ul style="list-style-type: none"> - QA of CT, MLC tests, IMRT plan verification, IGRT system QA, Head and neck case planning, SBRT lung planning, SRS brain tumour planning, end-to-end IMRT audit, LQ model for fractionation. 	<p>The participants should be radiotherapy physicists working in radiation therapy departments. Fluency in written and spoken Russian is required. This training course is not intended for radiation oncologists nor radiologists.</p>

<p>Regional Training Course on the Role of Advanced Imaging in Clinical Radiotherapy</p>	<p>3-7 October 2017</p>	<p>15 July 2017</p>	<p>The course is to provide theoretical and practical training in medical physics aspects of imaging and patient specific QA in treatment planning and verification, applicable to 3-D conformal radiation therapy, intensity modulated radiation therapy (IMRT) and image guided radiotherapy (IGRT).</p> <p>It is expected that the participants will gain in-depth knowledge of imaging and dosimetry used for treatment planning and verification of dose delivery, including equipment and methodology, and related QA procedures. The course will use the IAEA material published in Radiation Oncology Physics: a Handbook for Teachers and Students (IAEA 2005), IAEA Human Health Report 8: Development of Procedures for In Vivo Dosimetry in Radiotherapy; IAEA Human Health Series 19: Quality Assurance Programme for Computed Tomography: Diagnostic and Therapy Applications, as well as ICRU 50 and ICRU 83 reports.</p> <p>The course will consist of deductive lectures and practical sessions followed by discussions with the course participants. The course programme will include lectures on imaging and patient specific QA in radiation therapy treatment planning and verification as recommended by the IAEA and ICRU:</p> <ul style="list-style-type: none"> - Role of imaging in radiation therapy; - QA of radiotherapy process (including equipment commissioning); - Uncertainties in radiotherapy; - Imaging diagnostic equipment, simulator, CT-SIM, and related QA; physical parameters of imaging equipment; - Imaging for treatment planning; TPS QC (independent MU calculation, IMRT dose distribution, DVH generation, etc.); - Dosimetric verification: equipment and methods - IMRT/VMAT: equipment, methods and QA; - IGRT techniques: equipment, methods and QA; 4D-CT; - Clinical implementation of IGRT and correction strategies; managing imaging dose; - Patient specific QA for imaging, treatment planning and dose delivery; - In vivo dosimetry; portal dosimetry; - Other topics: record & verify systems and their QA, electronic data management (DICOM), immobilization; - Audits in radiotherapy. <p>Practical sessions will entail:</p> <p>QA of simulator/CT, IGRT system QA, gating and tracking, QA of gating and tracking, patient specific QA</p>	<p>The participants should be radiotherapy physicists working in radiation therapy departments. Fluency in written and spoken Russian is required. This training course is not intended for radiation oncologists nor radiologists.</p>
-------------------------------------------------------------------------------------------------	--------------------------------	----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

All courses will be conducted in Russian Language, and fluency in written and spoken Russian language is required.