



**First IAEA/ICTP School of Nuclear Energy Management  
November 8 - 26, 2010  
Programme Structure**

**Activity Venue: Kastler Lecture Hall (Adriatico Guesthouse), Via Grignano, 9, 34151 Trieste, Italy**

**November 8 ONLY: The Euler Lecture Hall (Leonardo Building), Strada Costiera, 11**

**NEM\_Schedule\_05.Nov.2010.doc**

	Topics	Lecturer	Mode of Delivery Lecture, video conference, movie, seminar, etc.	
<b>WEEK ONE</b>				
<b>Nov 8</b>	<b>Introductions – Programme, Logistics, Hosts, etc.</b>			
08:30 – 09:30	Registration and administration <b><u>The Euler Lecture Hall (Leonardo Building), Strada Costiera, 11</u></b>			
09:30 - 10:20	Programme Overview, Logistics, Group Projects Introduction	Andrey Kosilov (IAEA) Toshio Konishi (IAEA)		
10:20 – 10:45	ICTP Strategic Plan	Fernando Quevedo (ICTP Director)	Video conference from “ICTP after 45: Science and Development for a Changing World”	
10:45 – 11:15	COFFEE BREAK (together with After 45)			
11: 15 - 11:45	Introduction of Participants			
11: 45- 12:30	Introduction to the IAEA – history, structure, roles etc.	Yukiya Amano (IAEA Director General) Yanko Yanev(IAEA)	Pre-recorded lecture  Lecture	
12:30 - 14:00	LUNCH BREAK			
14:00 – 15:30	The Future of Science	David Gross (Director, The Kavli Institute for Theoretical Physics, USA, and Physics Nobel Laureate 2004)	Video conference from “ICTP after 45: Science and Development for a Changing World”	
15:30 - 16:00	COFFEE BREAK			
16:00 -	Session on Supporting Science in the Developing World	Co-chairs: Gretchen Kalonji (Assistant Director General, UNESCO), Werner Burkart (Deputy-Director General, IAEA)	Video conference from “ICTP after 45: Science and Development for a Changing World”	
<b>Nov 9</b>	<b>World Energy Balance, Nuclear Power and Nuclear Power Economics</b>			
08:30 – 09:00	<b>Opening</b>	Werner Burkart (IAEA Deputy Director General) Holger Rogner (IAEA)		

		Claudio Tuniz (ICTP)		
09:00 - 09:45	World Energy Demand & Supply	Holger Rogner (IAEA)	Lecture	
09:45 - 10:30	Why Nuclear Power?	Holger Rogner (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	Energy Planning	Mark Howells (IAEA)	Lecture	
11:45 - 12:15	IAEA Capacity Building in Energy Planning	Ahmed Irej Jalal (IAEA)	Video-Conf	
12:15 - 12:30	Q & A			
12:30 - 13:45	LUNCH BREAK			
13:45 - 14:15	Economics of Nuclear Power	Holger Rogner (IAEA)	Lecture	
14:15 - 14:45	Financing Nuclear Projects	Nadira Barkatullah (IAEA)	Video-Conference	
14:45 - 15:00	Q & A			
15:00 - 15:30	COFFEE BREAK			
	<b>Nuclear Data, Materials and Research Reactors</b>			
15:30 - 16:10	Research Reactors, Accelerators and Radioisotopes	Mark Kellett	Lecture	
16:10 - 16:50	Nuclear Materials for Fission and Fusion	Mark Kellett	Lecture	
16:50 - 17:30	Nuclear Data	Daniel Abriola	Lecture	
17:30 - 18:00	Q & A	Mark Kellett and Daniel Abriola		
<b>Nov 10</b>	<b>Climate Change and Nuclear Power Economics</b>			
09:00 - 09:45	Climate change: from observations of current trends to future climate projections	Filippo Giorgio (ICTP)	Lecture	
09:45 - 10:30	Climate Change: Impacts, Adaptation and Vulnerability	Ferenc Toth (IAEA)	Video Conference	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	Mitigation of Climate Change and Role of the IAEA in the Climate Change Dialogue	Holger Rogner (IAEA)	Lecture	I
11:45 - 12:30	Q & A			
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:45	Case Studies in Strategic Energy Investment	Mark Howells (IAEA)	Lecture	
14:45 - 15:00	Group activity on Strategic Energy Investment - I	Mark Howells (IAEA)	Mentor	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:15	Group activity on Strategic Energy Investment - II	Mark Howells (IAEA)	Mentor	
16:15 - 17:30	Plenary – feedback on case studies	Mark Howells (IAEA)	Mentor	
17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 11</b>	<b>IAEA Support for Nuclear Power</b>			
09:00 - 10:00	Milestones Approach to develop a National Nuclear Power Programme	Vincent Nkong Njock (IAEA)	Lecture	

10:00 - 10:30	Commissioning, Operation and Life Management of NPPs	Vincent Nkong Njock (IAEA)		
10:30 - 11:00	COFFEE BREAK			
11:00 – 11:30	Integrated Management Systems	Andrey Kosilov (IAEA)	Lecture	
11:30 - 12:30	Current Reactor Technology, Advanced Reactor Development	Sama Bilbao Leon and Hadid Subki (IAEA)	Video conference	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO)	Peter Gowin (IAEA)	Lecture	
14:30 - 15:00	Case Studies on Nuclear Power Infrastructure Development	Vincent Nkong Njock (IAEA)	Mentor	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:30	Case Studies on Nuclear Power Infrastructure Development	Vincent Nkong Njock (IAEA)	Mentor	
16:30 - 17:30	Plenary – feedback on case studies	Vincent Nkong Njock (IAEA)	Mentor	
17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 12</b>	<b>Nuclear Fuel Cycle and Waste Management</b>			
09:00 - 10:00	Uranium Production Cycle	Peter Waggitt (IAEA)	Video-recorded lecture	
10:00 - 11:00	Advanced Nuclear Fuel Cycle	Uddharan Basak (IAEA)	Video conference	
11:00 - 11:30	COFFEE BREAK			
11:30 - 12:30	Radioactive Waste Management	Paul Degnan (IAEA)	Video conference or video-recorded	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Decommissioning of Nuclear Facilities	Michele Laraia (IAEA)	Lecture	
14:30 - 15:00	Case Studies – decommissioning of a nuclear facility	Michele Laraia (IAEA)	Mentor	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:30	Case Studies – decommissioning of a nuclear facility	Michele Laraia (IAEA)	Mentor	
16:30 - 17:30	Plenary – feedback on case studies	Michele Laraia (IAEA)	Mentor	
<b>FIRST WEEKEND</b>				
<b>13 November 2010: A technical tour to the Nuclear Training Centre "Milan Copic", Jozef Stefan Institute, Ljubljana, Slovenia (Ms. Toshio Konishi, IAEA)</b>				
Work on Projects on the weekend				

Module Developer	Topics	Lecturer	Mode of Delivery Lecture, video conference, movie, seminar, etc.	
<b>WEEK TWO</b>				
<b>Nov 15</b>	<b>Nuclear Safety &amp; Security – Day 1</b>			
09:00 - 09:30	Global Nuclear Safety Regime	Dominique Delattre (IAEA)	Lecture	
09:30 - 10:00	The IAEA Safety Standards	Dominique Delattre (IAEA)	Lecture	
10:00 - 10:30	Capacity Building and Education and Training in Nuclear and Radiation Safety	Dominique Delattre (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 – 12:00	Regulatory Infrastructure	Stephen Koenick (IAEA)	Lecture	
12:00 - 12:30	Peer Reviews and Advisory Services	Gabor Vamos, (IAEA)	Video conference	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	DS-424 – a road map to apply the safety standards to safety infrastructure	Stephen Koenick, (IAEA)	Lecture	
14:30 - 15:00	Oversight of Management Systems, Leadership and Safety Culture	Monica Haage, (IAEA)	Video conference	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:00	Oversight of Management Systems, Leadership and Safety Culture	Monica Haage, (IAEA)	Video conference	
16:00 - 17:30	SAET (Safety Assessment Education and Training) Curriculum	Michael Modro (IAEA)	Video conference	
17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 16</b>	<b>Nuclear Safety &amp; Security – Day 2</b>			
09:00 - 09:30	Target, Consequences and Threats for Nuclear Terrorism	Miroslav Gregoric (IAEA)	Lecture	
09:30 – 10:00	Exercise on Threat Characteristics	Miroslav Gregoric (IAEA)	Mentor	
10:00 - 10:30	IAEA Nuclear Security Plan	Miroslav Gregoric (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 – 11:30	Elements of a Nuclear Security Regime	Miroslav Gregoric (IAEA)	Lecture	
11:30 – 12:00	Measures to Prevent, Detect and Respond to a Nuclear Security Event	Miroslav Gregoric (IAEA)	Lecture	
12:00 - 12:30	IAEA Nuclear Security Series	Miroslav Gregoric (IAEA)	Lecture	
12:30 - 13:30	LUNCH BREAK			

13:30 - 14:00	Capacity Building – Nuclear Security Support Centre	Miroslav Gregoric (IAEA)	Lecture	
14:00 - 14:30	Nuclear Security Culture and its relationship to Safety Culture	Miroslav Gregoric (IAEA)	Lecture	
14:30 - 15:00	Information Collection and Analysis/Illicit Trafficking Database	Miroslav Gregoric (IAEA)	Lecture	
15:00 - 15:30	COFFEE BREAK			
15:30 - 17:00	Case Study	Miroslav Gregoric (IAEA)	Mentor	
17:00 - 17:30	The work of the Office of Nuclear Security (Video)	Miroslav Gregoric (IAEA)	Mentor	
<b>Nov 17</b>	<b>Nuclear safety &amp; Security – Day 3</b>			
09:00 – 10:00	Emergency Preparedness and Response	Rafael Martincic (IAEA)	Lecture/discussion	
10:00 – 10:30	Waste management and disposal	Monika Kinker (IAEA)	Video conference	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:30	Overall National Waste Management Policy and Strategy (including the Joint Convention on the Safety of Spent Fuel and Radioactive Waste)	Gerard Bruno (IAEA)	Video Conference	
11:30 – 12:00	Decommissioning and Environmental Remediation-	John Rowat (IAEA)	Video Conference	
12:00 – 12:30	International Safety Standards: Protection of Public and Environment	Volodymyr Berkovskyy (IAEA)	Video conference	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Nuclear Safety & Security Wrap-up Session	Annick Carnino, France	Lecture	
<b>14:30 - 17:30</b>	<b>Work on Group Projects</b>			
17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 18</b>	<b>Nuclear Law</b>			
09:00 - 09.15	What is Nuclear Law?	Anthony Wetherall (IAEA)	Lecture	
09.15 - 10:30	The International Legal Framework for Nuclear Safety and Security	Anthony Wetherall (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	The International Legal Framework for Civil Liability for Nuclear Damage	Anthony Wetherall (IAEA)	Lecture	
11:45 - 12:30	Overview of the Nuclear Non-Proliferation Regime	Ionut Suseanu (IAEA)	Lecture	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Export Controls	Ionut Suseanu (IAEA)	Lecture	
14:30 - 16:30	Developing National Nuclear Legislation (Case Study)	Anthony Wetherall (IAEA)	Mentor	
16:30 - 17:30	Plenary – feedback on case study	Anthony Wetherall (IAEA)	Mentor	

17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 19</b>	<b>Nuclear Safeguards</b>			
09:00 - 09:45	Safeguards Implementation	Dieter Zahradnik (IAEA)	Lecture	
09:45 - 10:30	Drawing Safeguards Conclusions	Roger Barnes (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	Non-proliferation Analysis of the Fuel Cycle	Dieter Zahradnik (IAEA)	Lecture	
11:45 - 12:30	SSAC Support (training, advisory service)	Roger Barnes (IAEA)	Lecture	
12:30 - 13:30	LUNCH BREAK			
13:30 - 15:00	The IAEA Safeguards System – a case study	Barnes & Zahradnik	Mentor	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:30	Plenary – feedback on case study	Barnes & Zahradnik	Mentor	
16:30 - 17:30	Panel Discussion on Safeguards Challenges	Barnes & Zahradnik	Mentor	
<b>SECOND WEEKEND</b>				
<b>20 November 2010: A technical tour to Krsko Nuclear Power Plant, Slovenia (Ms. Tatiana Karseka, IAEA)</b>				
Work on Projects on the weekend				

Module Developer	Topics	Lecturer	Mode of Delivery Lecture, video conference, movie, seminar, etc.	
<b>WEEK THREE</b>				
<b>Nov 22</b>	<b>Nuclear Leadership and Management</b>			
09:00 - 09:45	IAEA's leadership in the nuclear field – Past and Future	Alain Cardoso (IAEA)	Lecture	
09:45 - 10:30	Confidence and Trust	Ian Facer (UK)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	Nuclear Leadership and Management (part 1)	Ian Facer (UK)	Lecture	
11:45 - 12:30	Nuclear Leadership and Management (part 2)	Ian Facer (UK)	Lecture	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:20	How to set up a Technical Cooperation Programme with the IAEA	Alain Cardoso (IAEA)	Lecture	
<b>14:20 - 17:30</b>	<b>Work on Group Projects</b>			
17:30 – 18:30	Meeting with project supervisors		Video Conference	
<b>Nov 23</b>	<b>Human Resource Development and Knowledge Management</b>			
09:00 - 09:30	Knowledge Management Basics	Andrey Kosilov (IAEA)	Lecture	
09:30 - 10:00	Nuclear Knowledge Management	Yanko Yanev (IAEA)	Lecture	
10:00 - 10:30	Methods and Tools for KM	Andrey Kosilov (IAEA)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:30	Risk Assessment/Management of Knowledge Loss	Andrey Kosilov (IAEA)	Lecture	
11:30 - 12:00	KM for Nuclear Organizations	Yanko Yanev (IAEA)	Lecture	
12:00 - 12:30	Assessment of KM Maturity	Andrey Kosilov (IAEA)	Lecture	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:00	Human Resource Development	Brian Molloy (UK)	Lecture	
14:00 - 15:00	Competence Building and Nuclear Education	Yanko Yanev (IAEA)	Lecture	
15:00 - 15:30	COFFEE BREAK			
15:30 - 16:30	Workforce Planning and Training	Brian Molloy (UK)	Lecture	
16:30 - 18:00	Case Study on HR development	Brian Molloy (UK)	Mentor	
18:00 – 19:00	Meeting with project supervisors		Video Conference	
<b>Nov 24</b>	<b>Communication, Public Acceptance and Nuclear Sociology</b>			
09:00 - 09:45	Building Public Support	Brian Molloy (UK)	Lecture	

09:45 - 10:30	Nuclear Power and Radiation Risk: Myths and Scientific Realities	Pier Roberto Danesi (Italy)	Lecture	
10:30 - 11:00	COFFEE BREAK			
11:00 - 11:45	Public Communications: communicating the safety significance of events –INES	Rejane Spiegelberg Planer (IAEA)	Lecture	
11:45 - 12:30	Nuclear Sociology	Yanko Yanev (IAEA)	Lecture	
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:15	Rating events using INES	Rejane Spiegelberg Planer (IAEA)	WG exercise and discussion	
14:30 -	<b>Work on Group Projects</b>			
17:00 – 19:00	Meeting with project supervisors		Video Conference	
<b>Nov 25</b>	<b>TEST &amp; Group Project Work</b>			
10:00 - 12:30	<b>TEST</b>			
12:30 - 13:30	LUNCH BREAK			
13:30 – 14:30	Future of Nuclear Applications and Technology	Pier Roberto Danesi (Italy)	Lecture	
14:30 – 15:15	Nuclear Desalination: What Can Nuclear Do for Freshwater Scarcity?	Toshio Konishi (Japan)	Lecture	
15:30 -	Finalize Group Project Outputs and Presentations			
<b>Nov 26</b>	<b>Presentation of Project Outputs and Graduation Ceremony</b>			
09:00 - 10:30	Project Presentations		Video Conference with IAEA	
10:30 - 11:00	COFFEE BREAK			
11:00 - 12:30	Project Presentations		Video Conference with IAEA	
12:30 - 13:30	LUNCH BREAK			
13:30 - 15:00	Project Presentations		Video Conference with IAEA	
15:00 - 15:30	COFFEE BREAK			
15:30 - 17:30	Round table discussion Graduation Ceremony, Closing Remarks.			