

Joint IAEA/ICTP School of Nuclear Energy Management Programme Structure

Venue: **Kastler Lecture Hall** (Adriatico Guesthouse), Trieste, Italy

	Topics	Lecturer	Mode of Delivery	講義名／教材
WEEK ONE				
Nov 8	Introductions – Programme, Logistics, Hosts, etc.			
08:30 – 09:30	Registration and administration <u>The Euler Lecture Hall (Leonardo Building), Strada Costiera, 11</u>			
09:30 - 10:20	Programme Overview, Logistics, Group Projects Introduction	Andrey Kosilov (IAEA) Toshio Konishi (IAEA)		全体概要
10:20 – 10:45	ICTP Strategic Plan: “ICTP after 45: Science and Development for a Changing World”	Fernando Quevedo (ICTP Director)	Video conference	ICTP 記念講演
11: 15 - 11:45	Introduction of Participants			参加者自己紹介
11: 45- 12:30	Introduction to the IAEA – history, structure, roles etc.	Yukiya Amano (IAEA DG) Yanko Yanev(IAEA)	Pre-recorded video Lecture	若手育成の重要性 IAEA歴史と未来
12:30 - 14:00	LUNCH BREAK			
14:00 – 15:30	The Future of Science: “ICTP after 45: Science and Development for a Changing World”	David Gross (Physics Nobel Laureate 2004, USA,)	Video conference	ICTP 記念講演
16:00 -	Session on Supporting Science in the Developing World: “ICTP after 45: Science and Development for a Changing World”	Co-chairs: Gretchen Kalonji (UNESCO), Werner Burkart (IAEA)	Video conference	ICTP 記念講演
Nov 9	World Energy Balance, Nuclear Power and Nuclear Power Economics			
08:30 – 09:00	Opening	Werner Burkart (IAEA DDG) Holger Rogner (IAEA) Claudio Tuniz (ICTP)		開会セッション
09:00 - 09:45	World Energy Demand & Supply	Holger Rogner (IAEA)	Lecture	世界エネルギー需給
09:45 - 10:30	Why Nuclear Power?	Holger Rogner (IAEA)	Lecture	なぜ原子力か？
11:00 - 11:45	Energy Planning	Mark Howells (IAEA)	Lecture	エネルギー計画
11:45 - 12:15	IAEA Capacity Building in Energy Planning	Ahmed Irej Jalal (IAEA)	Video-Conf	エネルギー計画の人材育成
12:15 - 12:30	Q & A			Q&A
12:30 - 13:45	LUNCH BREAK			

13:45 - 14:15	Economics of Nuclear Power	Holger Rogner (IAEA)	Lecture	原子力の経済性
14:15 - 14:45	Financing Nuclear Projects	Nadira Barkatullah (IAEA)	Video-Conference	ファイナンス
14:45 - 15:00	Q & A			Q&A
	Nuclear Data, Materials and Research Reactors			
15:30 - 16:10	Research Reactors, Accelerators and Radioisotopes	Mark Kellett (IAEA)	Lecture	研究炉、RI
16:10 - 16:50	Nuclear Materials for Fission and Fusion	Mark Kellett (IAEA)	Lecture	原子力材料
16:50 - 17:30	Nuclear Data	Daniel Abriola (IAEA)	Lecture	核データ
17:30 - 18:00	Q & A	Mark Kellett and Daniel Abriola		Q&A
Nov 10	Climate Change and Nuclear Power Economics			
09:00 - 09:45	Climate change: from observations of current trends to future climate projections	Filippo Giorgio (ICTP)	Lecture	気候変動問題
09:45 - 10:30	Climate Change: Impacts, Adaptation and Vulnerability	Ferenc Toth (IAEA)	Video Conference	気候変動対応
11:00 - 11:45	Mitigation of Climate Change and Role of the IAEA in the Climate Change Dialogue	Holger Rogner (IAEA)	Lecture	気候変動緩和策
11:45 - 12:30	Q & A			Q&A
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:45	Case Studies in Strategic Energy Investment	Mark Howells (IAEA)	Lecture	演習：投資戦略
14:45 - 15:00	Group activity on Strategic Energy Investment - I	Mark Howells (IAEA)	Mentor	
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	
Nov 11	IAEA Support for Nuclear Power			
09:00 - 10:00	Milestones Approach to develop a National Nuclear Power Programme	Vincent Nkong Njock (IAEA)	Lecture	マイルストーン方式
10:00 - 10:30	Commissioning, Operation and Life Management of NPPs	Vincent Nkong Njock (IAEA)		原子力発電起動とプラント管理
11:00 – 11:30	Integrated Management Systems	Andrey Kosilov (IAEA)	Lecture	統合管理システム
11:30 - 12:30	Current Reactor Technology, Advanced Reactor Development	Sama Bilbao Leon and Hadid Subki (IAEA)	Video conference	改良炉、革新炉

12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO)	Peter Gowin (IAEA)	Lecture	INPRO
14:30 - 15:00	Case Studies on Nuclear Power Infrastructure Development	Vincent Nkong Njock (IAEA)	Mentor	演習：原子カインフラ整備
15:30 - 16:30	Case Studies on Nuclear Power Infrastructure Development	Vincent Nkong Njock (IAEA)	Mentor	同上
16:30 - 17:30	Plenary – feedback on case studies	Vincent Nkong Njock (IAEA)	Mentor	
17:30 – 18:30	Meeting with project supervisors		Video Conference	
Nov 12	Nuclear Fuel Cycle and Waste Management			
09:00 - 10:00	Uranium Production Cycle	Peter Waggitt (IAEA)	pre-recorded video	ウラン生産
10:00 - 11:00	Advanced Nuclear Fuel Cycle	Uddharan Basak (IAEA)	Video conference	先進核燃サイクル
11:30 - 12:30	Radioactive Waste Management	Paul Degnan (IAEA)	Video conference	廃棄物問題
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Decommissioning of Nuclear Facilities	Michele Laraia (IAEA)	Lecture	廃炉問題
14:30 - 15:00	Case Studies – decommissioning of a nuclear facility	Michele Laraia (IAEA)	Mentor	演習
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	
FIRST WEEKEND				
13 November 2010: A technical tour to the Nuclear Training Centre "Milan Copic", Jozef Stefan Institute, Ljubljana, Slovenia (Mr. Toshio Konishi, IAEA)				
Work on Projects on the weekend				

	Topics	Lecturer	Mode of Delivery	
WEEK TWO				
Nov 15	Nuclear Safety & Security – Day 1			
09:00 - 09:30	Global Nuclear Safety Regime	Dominique Delattre (IAEA)	Lecture	安全基準の世界レ ジーム
09:30 - 10:00	The IAEA Safety Standards	Dominique Delattre (IAEA)	Lecture	IAEA安全基準
10:00 - 10:30	Capacity Building and Education and Training in Nuclear and Radiation Safety	Dominique Delattre (IAEA)	Lecture	安全人材育成
11:00 – 12:00	Regulatory Infrastructure	Stephen Koenick (IAEA)	Lecture	規制インフラ
12:00 - 12:30	Peer Reviews and Advisory Services	Gabor Vamos, (IAEA)	Video conference	IAEAのレビュー 制度
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	安全基準と安全イ ンフラ
14:30 - 15:30	Oversight of Management Systems, Leadership and Safety Culture	Monica Haage, (IAEA)	Video conference	安全文化
16:00 - 17:30	SAET (Safety Assessment Education and Training) Curriculum	Stephen Koenick (IAEA)	Video conference	安全評価教育と研 修
17:30 – 18:30	Meeting with project supervisors <ul style="list-style-type: none"> • Leadership and Management • Coordination 	Ian Facer Yanko and others	Video Conference	
Nov 16	Nuclear Safety & Security – Day 2			
09:00 - 09:30	Target, Consequences and Threats for Nuclear Terrorism	Miroslav Gregoric (IAEA)	Lecture	核テロ問題
09:30 – 10:00	Exercise on Threat Characteristics	Miroslav Gregoric (IAEA)	Mentor	演習：核テロ
10:00 - 10:30	IAEA Nuclear Security Plan	Miroslav Gregoric (IAEA)	Lecture	核セキュリティー 対策
11:00 – 11:30	Elements of a Nuclear Security Regime	Miroslav Gregoric (IAEA)	Lecture	核セキュリティー レジーム
11:30 – 12:00	Measures to Prevent, Detect and Respond to a Nuclear Security Event	Miroslav Gregoric (IAEA)	Lecture	核セキュリティー 問題対策
12:00 - 12:30	IAEA Nuclear Security Series	Miroslav Gregoric (IAEA)	Lecture	核セキュリティー 文書体系

12:30 - 13:30	LUNCH BREAK			
13:30 - 14:00	Capacity Building – Nuclear Security Support Centre	Miroslav Gregoric (IAEA)	Lecture	緊急対応人材育成
14:00 - 14:30	Nuclear Security Culture and its relationship to Safety Culture	Miroslav Gregoric (IAEA)	Lecture	安全文化と核セキュリティ文化
14:30 - 15:00	Information Collection and Analysis/Illicit Trafficking Database	Miroslav Gregoric (IAEA)	Lecture	不法移転情報分析とデータベース
15:30 - 17:00	Case Study	Miroslav Gregoric (IAEA)	Mentor	演習
17:00 - 17:30	The work of the Office of Nuclear Security (Video)	Miroslav Gregoric (IAEA)	Mentor	核セキュリティ室の活動
Nov 17	Nuclear safety & Security – Day 3			
09:00 – 10:00	Emergency Preparedness and Response	Rafael Martincic (IAEA)	Lecture	緊急時対応
10:00 – 10:30	Waste management and disposal	Monika Kinker (IAEA)	Video conference	廃棄物処分
11:00 - 11:30	Overall National Waste Management Policy and Strategy (including the Joint Convention on the Safety of Spent Fuel and Radioactive Waste)	Monika Kinker (IAEA)	Video Conference	廃棄物管理政策 使用済燃料・廃棄物管理条約
11:30 – 12:00	Decommissioning and Environmental Remediation-	John Rowat (IAEA)	Video Conference	廃炉と環境
12:00 – 12:30	International Safety Standards: Protection of Public and Environment	Volodymyr Berkovskyy (IAEA)	Video conference	「公衆の安全」
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Nuclear Safety & Security Wrap-up Session	Annick Carnino, France	Lecture	IAEA安全総括
14:30 - 17:30	Work on Group Projects			
17:30 – 18:30	Meeting with project supervisors • HLW disposal	Paul Joseph Degnan	Video Conference	
Nov 18	Nuclear Law			
09:00 - 09:15	What is Nuclear Law?	Anthony Wetherall (IAEA)	Lecture	原子力法とは？
09:15 - 10:30	The International Legal Framework for Nuclear Safety and Security	Anthony Wetherall (IAEA)	Lecture	安全・核セキュリティ テイーを取り巻く 国際法
11:00 - 11:45	The International Legal Framework for Civil Liability for Nuclear Damage	Anthony Wetherall (IAEA)	Lecture	原子力損害補償の 国際法
11:45 - 12:30	Overview of the Nuclear Non-Proliferation Regime	Ionut Suseanu (IAEA)	Lecture	核不拡散全体像

12:30 - 13:30	LUNCH BREAK			
13:30 - 14:30	Export Controls	Ionut Suseanu (IAEA)	Lecture	輸出管理
14:30 - 16:30	Developing National Nuclear Legislation (Case Study)	Anthony Wetherall (IAEA)	Mentor	演習：法制整備
16:30 - 17:30	Plenary – feedback on case study	Anthony Wetherall (IAEA)	Mentor	
17:30 – 18:30	Meeting with project supervisors • New Project Team	Vincent Nkong NJock	Video Conference	
Nov 19	Nuclear Safeguards			
09:00 - 09:45	Safeguards Implementation	Dieter Zahradnik (IAEA)	Lecture	保障措置制度
09:45 - 10:30	Drawing Safeguards Conclusions	Roger Barnes (IAEA)	Lecture	保障措置の内容
11:00 - 11:45	Non-proliferation Analysis of the Fuel Cycle	Dieter Zahradnik (IAEA)	Lecture	核不拡散性のチェック
11:45 - 12:30	SSAC Support (training, advisory service)	Roger Barnes (IAEA)	Lecture	核物質軽量の国レベル管理
12:30 - 13:30	LUNCH BREAK			
13:30 - 15:00	The IAEA Safeguards System – a case study	Barnes & Zahradnik	Mentor	演習：保障措置
15:30 - 16:30	Plenary – feedback on case study	Barnes & Zahradnik	Mentor	
16:30 - 17:30	Panel Discussion on Safeguards Challenges	Barnes & Zahradnik	Mentor	
SECOND WEEKEND				
20 November 2010: A technical tour to Krsko Nuclear Power Plant, Slovenia (Ms. Tatiana Karseka, IAEA)				
Work on Projects on the weekend				

	Topics	Lecturer	Mode of Delivery	
WEEK THREE				
Nov 22	Nuclear Leadership and Management			
09:00 - 09:45	IAEA's leadership in the nuclear field – Past and Future	Alain Cardoso (IAEA)	Lecture	原子力におけるIAEA役割
09:45 - 10:30	Confidence and Trust	Ian Facer (UK)	Lecture	自信と信頼
11:00 - 12:30	Nuclear Leadership and Management	Ian Facer (UK)	Lecture	リーダーシップ
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	技術協力プログラム
14:20 - 17:30	Work on Group Projects			
17:30 – 18:30	Meeting with project supervisors • Nuclear Threat	Andrea Braunegger-Guelich Robert N Wesley	Video Conference	
Nov 23	Human Resource Development and Knowledge Management			
09:00 - 09:30	Knowledge Management Basics	Andrey Kosilov (IAEA)	Lecture	知識管理
09:30 - 10:00	Nuclear Knowledge Management	Yanko Yanev (IAEA)	Lecture	原子力知識管理
10:00 - 10:30	Methods and Tools for KM	Andrey Kosilov (IAEA)	Lecture	知識管理手法 原子力教育
11:00 - 11:30	Risk Assessment/Management of Knowledge Loss	Andrey Kosilov (IAEA)	Lecture	知識喪失リスク管理
11:30 - 12:00	KM for Nuclear Organizations	Yanko Yanev (IAEA)	Lecture	原子力知識管理の例
12:00 - 12:30	Assessment of KM Maturity	Andrey Kosilov (IAEA)	Lecture	知識管理の評価
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:00	Human Resource Development	Brian Molloy (UK)	Lecture	人材育成
14:00 - 15:00	Competence Building and Nuclear Education	Yanko Yanev (IAEA)	Lecture	原子力教育
15:30 - 16:30	Workforce Planning and Training	Brian Molloy (UK)	Lecture	マンパワー計画
16:30 - 18:00	Case Study on HR development	Brian Molloy (UK)	Mentor	演習
Nov 24	Communication, Public Acceptance and Nuclear Sociology			

09:00 - 09:45	Building Public Support	Brian Molloy (UK)	Lecture	公衆の教育
09:45 - 10:30	Nuclear Power and Radiation Risk: Myths and Scientific Realities	Pier Roberto Danesi (Italy)	Lecture	原子力リスクと実際
11:00 - 11:45	Public Communications: communicating the safety significance of events –INES	Rejane Spiegelberg Planer (IAEA)	Lecture	原子力事象評価尺度 (INES) Part-1, Part-2
11:45 - 12:30	Rating events using INES	Rejane Spiegelberg Planer (IAEA)	WG exercise and discussion	INES の適用例 Part-1, Part-2
12:30 - 13:30	LUNCH BREAK			
13:30 - 14:15	Nuclear Sociology	Yanko Yanev (IAEA)	Lecture	原子力社会学
14:30 -	Work on Group Projects			
17:00 – 19:00	Meeting with project supervisors • HLW disposal	Paul Joseph Degnan	Video Conference	
Nov 25	TEST & Group Project Work			
10:00 - 12:30	TEST			試験
12:30 - 13:30	LUNCH BREAK			
13:30 – 14:30	Future of Nuclear Applications and Technology	Pier Roberto Danesi (Italy)	Lecture	原子力利用技術の未来
14:30 – 15:15	Nuclear Desalination: What Can Nuclear Do for Freshwater Scarcity?	Toshio Konishi (Japan)	Lecture	原子力による海水淡水化
15:30 -	Finalize Group Project Outputs and Presentations			
Nov 26	Presentation of Project Outputs and Graduation Ceremony			
09:00 - 10:30	Project Presentations			発表会
11:00 - 12:30	Project Presentations			発表会
12:30 - 13:30	LUNCH BREAK			
13:30 - 15:00	Project Presentations			発表会
15:30 - 17:30	Round table discussion Graduation Ceremony, Closing Remarks.			全体討議 修了式