

## BIPM Capacity Building & Knowledge Transfer Programme

### 2017 "Sound beginning in the CIPM MRA" course

## COURSE ACTIVITIES AGENDA

Course dates: 13 to 24 November, 2017

Location: BIPM, Sèvres, France

Date	Topic	Outline of content	Instructors
<b>9:00 am</b>	<b>Registration of the participants</b>		
<b>Day 1</b> Monday Nov. 13	Global Quality infrastructure and its key components	Welcome and opening	Dr Martin Milton
		General intro to the course content	Mr Chingis Kuanbayev
		Global QI: General overview	Mr Andy Henson
		Importance of Quality Infrastructure	Dr Clemens Sanetra
		Role of Metrology (BIPM)	Mr Andy Henson
		Role of Accreditation (ILAC)	Mr Laurent Vinson
		Role of Legal metrology (OIML)	Mr Ian Dunmill
		<b>Case study: QI Practical examples &amp; Roles and responsibilities</b>	Dr Clemens Sanetra
	<i>Free discussion</i>	Instructors	
<b>17:00 pm</b>	<b>End of day 1</b>		
<b>9:00 am</b>	Introduction to the Metre Convention, the CIPM MRA and its role in the wider quality infrastructure	<i>Metre Convention: Interactions with Member States and Associates</i>	Dr Martin Milton
<b>Day 2</b> Tuesday Nov. 14		CIPM MRA and its role in the QI	Mr Andy Henson
		Roles of Designated Institutes	Ms Sally Bruce
		CIPM Requirements and documentation	Mr Andy Henson
		JCRB: inter-regional CMC review process	Mr Nikita Zviagin
		Introduction of the KCDB	Dr Susanne Picard
		KCDB and Comparisons	Dr Susanne Picard
		KCDB and CMCs	Dr Stephanie Maniguet
		Statistics on the KCDB	Mr Nikita Zviagin
		KCDB 2.0	Dr Susanne Picard
		<b>Case study: Impacts of the CIPM MRA</b>	Mr Jason Koehn
			<i>Free discussion</i>
<b>17:00 pm</b>	<b>End of day 2</b>		
<b>9:00 am</b>	Quality management systems Regional metrology organization approaches and specifics	Role of Standardisation (ISO) and importance of ISO/IEC 17025	Mr Sean MacCurtain
<b>Day 3</b> Wednesday Nov. 15		CIPM requirements and documentation on quality system	Mr Andy Henson
		AFRIMETS approach in quality systems and specifics	Prof. Noha Khaled
		APMP approach in quality systems and specifics	Dr Ilya Budovsky
		COOMET approach in quality systems and specifics	Dr Andreas Odin
		GULFMET approach in quality systems and specifics	Mr Mohammed Ahmed Al Mulla

Date	Topic	Outline of content	Instructors
		SIM approach in quality systems and specifics	Ms Sally Bruce
		<b>Case study:</b> How to organize a metrological laboratory	Mr Zijad Dzemic
		<b>Case study:</b> How to establish a quality system acceptable to RMO	Mrs Jessica Chavarría Sánchez
		<b>Group work on Quality:</b> Establishing metrology laboratory <i>Free discussion</i>	Mr Zijad Dzemic Mrs Jessica Chavarría Sánchez
<b>17:00 pm</b>	<b>End of day 3</b>		
<b>9:00 am</b>		CIPM Requirements and documentation on comparisons	Mr Chingis Kuanbayev
<b>Day 4</b> Thursday Nov. 16	<i>Measurement comparisons and Calibration and measurement capabilities (CMCs)</i>	Specific guidelines for comparisons and CMCs in Electricity and Magnetism	Dr Ilya Budovsky
		Specific guidelines for comparisons and CMCs in Chemistry and Biology	Dr Angelique Botha
		Specific guidelines for comparisons and CMCs in Mass and related quantities	Dr Stuart Davidson
		Specific guidelines for comparisons and CMCs in Thermometry	Dr Karen Garrity
		Measurement comparisons (Planning and monitoring)	Dr Carine Michotte
		Measurement comparisons (Calculation of reference values and associated uncertainties)	Dr Richard Davis
	<i>Focus on Comparisons</i>	<b>Case study:</b> How to participate effectively in comparisons	Mrs. Manana Gelovani
		<b>Group work on Comparisons:</b> How to participate in comparisons? How to pilot a comparison? <i>Free discussion</i>	Dr Ilya Budovsky Mrs. Manana Gelovani
<b>17:00 pm</b>	<b>End of day 4</b>		
<b>9:00 am</b>		CIPM Requirements and documentation on CMCs	Mr Nikita Zviagin
<b>Day 5</b> Friday Nov. 17	<i>Measurement comparisons and Calibration and measurement capabilities (CMCs)</i>	Specific guidelines for comparisons and CMCs in Ionizing Radiation	Dr Liza Karam
		Specific guidelines for comparisons and CMCs in Length	Dr Andrew Lewis
		Measurement traceability	Mr Andy Henson
		Developing uncertainty budgets including consistency with supporting evidence	Dr Antonio Possolo
		Submission of CMCs for inter-regional review through the JCRB	Mr Nikita Zviagin
		<i>Focus on CMCs</i>	<b>Case study:</b> From drawing CMCs to publication (practical examples)
		<b>Group work on CMCs:</b> How to prepare CMCs and how to modify it? <i>Free discussion</i>	Dr Andrew Lewis Dr Ilya Budovsky
	<b>17:00 pm</b>	<b>End of day 5</b>	
<b>Day 6</b> Saturday Nov. 18	<b>Homework: projects on Quality Systems, Comparisons and CMCs</b>		Participants

Date	Topic	Instructors		
<b>9:00 am</b>	<b>CIDT "Hitting the target" session</b>	Prof. Philip N. Dearden		
<b>Day 7</b> Monday Nov. 20				
	<i>Lab tour: Mass, Watt balance</i>	Dr Michael Stock		
<b>17:00 pm</b>	<b>End of day 7</b>			
<b>9:00 am</b>	<b>CIDT "Hitting the target" session</b>	Prof. Philip N. Dearden		
<b>Day 8</b> Tuesday Nov. 21				
	<i>Lab tour: TAI, Electricity</i>	Dr Felicitas Arias Dr Michael Stock		
<b>17:00 pm</b>	<b>End of day 8</b>			
<b>9:00 am</b>	<b>CIDT "Hitting the target" session</b>	Prof. Philip N. Dearden		
<b>Day 9</b> Wednesday Nov. 22				
	<i>Lab tour: IR, Chemistry</i>	Dr Steven Judge Dr Robert I. Wielgosz		
<b>17:00 pm</b>	<b>End of day 9</b>			
<b>9:00 am</b>	<b>CIDT "Hitting the target" session wrap up</b>	Prof. Philip N. Dearden		
<b>Day 10</b> Thursday Nov. 23			Overview of the course	Mr Andy Henson
			Project presentation: QS, Comparisons and CMCs (20 min/project)	Group A
			Brainstorming on implementation plans	Mr Andy Henson Prof. Philip N. Dearden
			Project presentation: QS, Comparisons and CMCs (20 min/project)	Group B
			Brainstorming on implementation plans	Mr Andy Henson Prof. Philip N. Dearden
			Project presentation: QS, Comparisons and CMCs (20 min/project)	Group C
			Brainstorming on implementation plans	Mr Andy Henson Prof. Philip N. Dearden
<b>17:00 pm</b>	<b>End of day 10</b>			
<b>9:00 am</b>	Project presentation: QS, Comparisons and CMCs (20 min/project)	Group D		
<b>Day 11</b> Wednesday Nov. 24	Brainstorming on implementation plans	Mr Andy Henson Prof. Philip N. Dearden		
	Project presentation: QS, Comparisons and CMCs (20 min/project)	Group E		
	Brainstorming on implementation plans	Mr Andy Henson Prof. Philip N. Dearden		
	Free discussion, Course wrap up	Mr Andy Henson Prof. Philip N. Dearden		
	Diploma ceremony	CIPM Member Mr Luc Erard		
<b>17:00 pm</b>	<b>Close of the course</b>			