

**APPLICATION/NOMINATION FORM
FOR GMA WORKSHOP 2020**

Selection of Courses <i>(Please tick <input checked="" type="checkbox"/> where to attend!)</i>		Themes	Dates <i>(including orientation)</i>	Application due by
<input type="checkbox"/>	GMA-GT-2020-01: AUV	Acoustics, Ultrasound and Vibration	March 21 – April 2, 2020	Jan 10, 2020
<input type="checkbox"/>	GMA-GT-2020-02: MAC	Metrology in Analytical Chemistry	June 13 - 24, 2020	Mar 20, 2020

I. PERSONAL DATA <i>(names should be as same as stated in your passport)</i>		Photo file Attached. <i>(no older than recent 6 months)</i>
Gender: <input type="checkbox"/> Female (Ms.) <input type="checkbox"/> Male (Mr.)	Date of Birth (Date/Month/Year): 13/05/80	
First Name:	Passport Number:	
Family Name:	Date of Issue (Date/Month/Year): 07/25/15	
Nationality:	Date of Expiry (Date/Month/Year): 03/27/2025	

Complete Mailing Address (office)			
Name of Organization		Email	@
Street		Mobile	+ 63
Town		Phone (office)	+ 632
City/Province		Fax	+ 63
Country (& Post Code)		Web page	www.
<i>Flight Itinerary (tentative)</i>	<u>Date/Time/Flight # of arrival in Korea</u>	<u>Date/Time/Flight# of departure from Korea</u>	

II. PROFESSIONAL EXPERIENCES <i>(commencing with the most recent employment career)</i>		
Years of Service (From – to)	Name and place of Employer (Country)	Title of position/laboratory(section)
Jan/2010 Present	0000000000 (0000000000000)	
Mar/2005 Dec/2009	0000000000 (0000000000000)	

III. EDUCATIONAL BACKGROUND <i>(commencing with the most recent academic degree/course)</i>				
Years attended from to	Name of Institution	Place/Country	Major (Field of study)	Degree/Certificate awarded
Mar/1986 Feb/1997				M.S.
Mar/1974 Feb/1980				B.S..

IV. KNOWLEDGE OF LANGUAGES <i>(please tick <input checked="" type="checkbox"/> where appropriate!)</i>									
	SPEAKING			READING			WRITING		
	Good	Fair	Not easily	Good	Fair	Not easily	Good	Fair	Not easily
ENGLISH									
OTHERS ()									

V. DESCRIPTIONS OF CURRENT JOB <i>(Please describe your current job as detailed as possible! Use more space as appropriate!)</i>
● ● ●

VI. PRIMARY OBJECTIVES INTENDED TO ACHIVE BY PARTICIPATING IN THIS COURSE

(Use more space as appropriate.)

-
-
-

VII. PLAN TO APPLY AND SHARE THE RESULTS OF YOUR STUDY AT KRISS

(* How to share what you have learned within the community of your organization and further use it for offering services for your customers in your country. Please use more space as appropriate!)

[Examples]

- 1) Ooooooooooooo in a form of seminar for sharing results...
- 2) Ooooooooooooo in a form of developing/improving new services for customers (e.g. training of calibration skills, ...
- 3) etc...

VIII. STATEMENT OF MEDICAL EXAMINATION [to be filled in and signed by the medical doctor]

I, as a qualified medical doctor, hereby certify that I have examined the above candidate and found him/her in good health, free from infectious diseases and able physically and mentally to carry out any relevant duties away from his/her home.

Date: (Date/Month/Year):

Name of examining physician

Name of applicant:

Seal and Signature of examining physician

IX. RULES & REGULATIONS [IMPORTANT!]

I, the undersigned, hereby agree to strictly abide by the "Rules and Regulations" as specified below during my participation in the subject GMA course:

1. Participants shall conduct themselves at all times in a manner compatible with their status as participants in the subject GMA course
2. Participants shall participate in the GMA group and/or individual courses to the best of their abilities;
3. Participants should refrain from engaging in political activity or any form of employment for profit or gain;
4. Participants must return to their home country upon completion of the subject course of GMA and resume work in their country;
5. Participants should not extend the length of stay in Korea for personal convenience;
6. Participants whose flights are supported by GMA or by any other donor are **not permitted** to change their flights for their personal convenience;
7. Participants should not be accompanied by any member of their family;
8. Participants are to assume responsibility for any personal expenses incurred regardless of implementation of the course; and
9. Participants are required to strictly observe the course schedule and abide by the **rules and regulations stipulated by the KRISS and their sponsors, and the laws of the Republic of Korea.**
10. Any form of harassment or insult, including but not limited to misconduct arising out of racial/ethnic, gender or class discrimination, whether it be physical or verbal, will not be tolerated and will be dealt with in accordance with the laws of the Republic of Korea and the rules and regulations of KRISS.
11. Especially, **sexual harassment**, defined as a form of behavior characterized by sexually connotative words, acts or gestures that could undermine individual dignity and by which the victim takes offense, is regarded as a serious misconduct and will be dealt with accordingly.
12. Offenders who fail to comply with the above **Rules and Regulations** laws shall be subject to punishment in accordance with the laws of the Republic of Korea and the regulations of KRISS, **which include sending an official letter of complaint to the offender's employer and government and instant deportation with ban of the offender's participation in the future GMA programs.**

Date (Date/Month/Year): 00 / 00 /2020

Name of Applicant: _____

Signature of Applicant: _____

Organization: _____

Country: _____

X. OFFICIAL APPLICATION AND NOMINATION

I hereby certify that the statements made by me in this application/nomination are true and correct in every respect.

Date (Date/Month/Year): 00 / 00 /2020 _____

Name of Applicant: _____

Signature of Applicant: _____

Organization: _____

Country: _____

I hereby certify that the above information supplied by the applicant is complete and correct and that the applicant has been officially nominated to participate in the subject GMA course.

Date (Date/Month/Year): 00 /00 /2020 _____

Name in Full: _____

Email Address: _____

Position/Title: _____

Organization: _____

Signature of Nominator: _____

Country: _____

XI. TUITION FEE and PAYMENT: US\$750 US\$1,500

(*→ **Before making application**, please contact the workshop coordinator who will advise you of your tuition fee category applicable!) (* MR. SANGWOOK SEO swseo@kriss.re.kr OR PKOKOREA@GMAIL.COM).

- Tuition is to be paid (**bank transfer**) by **the designated date for each course** as below:
 - **February 20, 2020 (AUV workshop participants);** and
 - **April 30, 2020 (MAC workshop participants);**
- **Invoice is not issued separately.** A receipt might be issued upon the participant's arrival at KRISS.

XII. BANKING INFORMATION

- Bank Name: Kook-Min Bank (Yuseong Branch)
- **SWIFT Code: CZNBKRSE**
- **ACCOUNT Number: 461-01-0184-494**
- Account Holder's Name: Korea Research Institute of Standards and Science (KRISS)
- Bank Address: 1F, #468-3, Bongmyeong-dong, Yuseong-gu, Daejeon, Korea

- Please make sure that the tuition fee should be paid by the **designated dates of payment for each course**, in **bank transfer** to the official bank account of KRISS that is designated above.
- **All handling and banking charges** raised both to the remitter and beneficiary shall **be met by the remitter**, so that the **total amount of the tuition fee should be received** by KRISS with no reduction on it.
- For confirmation of the payment, the **bank statement** should be Emailed (or Faxed) to: Korea Research Institute of Standards and Science (Attn. Mr. Sangwook SEO at swseo@kriss.re.kr; Fax +82-42-868-5565)
- **Please make sure that the bank statement** should be clearly stating the GMA course ID (GMA-GT-2020-01, GMA-GT-2020-02) and the acronym of your organization:
[Examples: GMA-GT-2020-01-VMI or GMA-GT-2020-02-KEBS]

- **NOTE→ A copy of passport, recent photo file, and CV of each participant SHOULD be accompanied by the application form in order that your application might be made complete and officially accepted.**

Theme: Metrology in Acoustics, Ultrasound and Vibration [AUV]

Dates: March 23 (Mon) - April 02 (Thu), 2020

Organized by: Global Metrology Academy (GMA), KRISS

Workshop Overview

[GMA-GT-2020-01-AUV]

Applications: by January 10, 2020

The Global Metrology Academy of KRISS offers workshops to meet the needs of metrology HRD of the customers both at home and from abroad who are responsible for metrology and related functions of national quality infrastructure of the nation. The workshop [GMA-GT-2020-01-AUV] is the first one scheduled to be offered in 2020. Its main theme is metrology in acoustics, ultrasound and vibration [AUV], to be presented in three (3) modules consisting of **measurement and calibration of acoustics, ultrasound and vibration**.

With its main target audience of **basic/Intermediate level** of metrologists, the AUV workshop will deliver the concepts of the traceability and measurement standards along with other key subjects of AUV that participants need to obtain for their future career as leaders in their local and global metrology communities.

As an effort to yield as much practical benefits as possible for participants, every session of the AUV workshop is strategically designed that technical lectures are effectively combined with hands-on laboratory exercises to follow. By the end of the workshop, participants might have better understanding of basic knowledge, skills, and information as up to dated on the key elements of metrology in AUV. It will enable them to offer better measurement services for their customers. In addition, participants will be given a two-day session of metrology in general (MiG) to learn selected fundamental subjects of metrology, such as the CIPM MRA requirements covering key comparison (KC); calibration and measurement capabilities (CMC), traceability, uncertainty in measurement, along with QMS (ISO/IEC 17025) and the revised SI.

Outline of Workshop Program [Subject to modifications*]**

Modules	Subjects	Chief Lecturers
Orientation	Introduction of KRISS, GMA, and Workshop (* to be offered for participants who will have arrived by Friday of the week just before opening.)	GMA
MiG (Days 1-2)	Metrology in General - FOUR (4) lectures presenting the fundamentals of metrology in general	Dr. Jookeun PARK (jkpark@kriss.re.kr)
AUV	Metrology in Acoustics and Vibration - Three (3) intensive laboratory sessions offered in parallel	Dr. Wan-Ho CHO (chowanho@kriss.re.kr)
AUV-01 (Day 3-4)	Acoustic Measurement and Calibration	Dr. Wan-Ho CHO (chowanho@kriss.re.kr)
AUV-02 (Day 5, 8)	Ultrasound Measurement and Calibration	Dr. Yong Tae Kim (ytkim@kriss.re.kr)
AUV-03 (Day 9-10)	Vibration Measurement and Calibration	Dr. Yong-Bong LEE (lyb@kriss.re.kr)
AUV (Days 11)	Performance test, Individual lab visits, Wrap-up & Closing	Center for Fluid Flow and Acoustics (GMA)

Knowledge
and skills to
be obtained

At the end of the workshop, participants will become familiar with fundamental knowledge and skills on the key subjects of measurement standards, traceability, calibration and uncertainty in the fields of metrology in acoustics, ultrasound and vibration along with the key measuring instruments. Intensive laboratory sessions (ILS) are effectively combined with lectures and hands-on exercises in ways that allow participants to obtain basic skills required for offering quality services for customers. A two-day session of metrology in general (MiG) will offer participants broad perspectives that will help them grow up to take the leading role in advancing the nation-wide measurement system up to the international level.

Who should
attend!

Metrologists who are working on R&D and measurement services in the fields of acoustics, ultrasound and vibration

Applications

Applications to be accepted: by January 10, 2020

Contact Point: Application and Inquiry

For applications and further information about participation in the course, please contact:
Sangwook SEO, Senior Coordinator, Global Metrology Academy (GMA), KRISS
swseo@kriss.re.kr

Workshop Program Overview: Modules, Lectures, Hands-on Exercises

** subject to modifications*

Mar 20 (Fri)	Arrival at Daejeon, check-in at the Hotel Graytone in Daejeon	recommended date of arrival at Daejeon, Korea
Mar 21 (Sat)	Orientation Session	10:00-12:00 (provisional)
Mar 22 (Sun)	Free	
MiG	Metrology in General: fundamentals of metrology and quality	March 23 (Mon) - 24 (Tue)
	Three (3) lectures and exercises (uncertainty evaluation)	Lecturers
DAY 1 (Mon) Mar 23	MiG-01 CIPM MRA: KC-CMC-Traceability in Measurement	Dr. Chu-Shik KANG, KRISS
	MiG-02 Uncertainty in Measurement (including exercises)	Dr. Chu-Shik KANG, KRISS
DAY 2 (Tue) Mar 24	MiG-03 Revised SI with Fundamental Constants	Dr. Seung Nam PARK, KRISS
	MiG-04 QMS Talk: why and for what - managment/technical requirements (ISO/IEC17025)	Dr. Jookeun PARK, KRISS
	Presentation of Laboratory Reports	Participants, GMA
AUV	Metrology in Acoustics, Ultrasound and Vibration - Intensive laboratory sessions addressing three key subjects of AUV	Mar 25(Wed)-26(Thu), Mar 30(Mon)-Apr 01 (Wed)
	Intensive Laboratory Session (ILS) with lectures and exercises	(L) Lecture, (H) Hands-on exercises
AUV-01 (Day 3-4)	Acoustic Measurement and Calibration	Mar 25(Wed)-26(Thu)
DAY 3 (Wed) March 25	(AUV-01-L-1) Basic Theory of Acoustics (1.5 h)	Dr. Sung-Soo Jung
	(AUV-01-L-2) Calibration of Microphone Sensitivity (1.5 h)	Dr. Wan-Ho Cho
	(AUV-01-H-1) Hands-on Exercises (3.0 h) - Calibration of Microphone Sensitivity	Dr. Jae-Gap-Suh / Dr. Wan-Ho Cho
DAY 4 (Thu) March 26	(AUV-01-L-3) Calibration of Sound Calibrators and Sound Level Meter (1.5 h)	Dr. Wan-Ho Cho
	(AUV-01-L-4) Sound Power Measurement and Evaluation of Facility (1.5 h)	Dr. Wan-Ho Cho
	(AUV-01-H-2) Hands-on Exercises: In two groups (3.0 h) - Calibration of Sound Level Meter - Calibration of Acoustic Calibrators	Dr. Jae-Gap-Suh / Dr. Wan-Ho Cho
AUV-02 (Day 5, 8, 9)	Ultrasound Measurement and Calibration	Mar 27(Fri), 30(Mon)
DAY 5 (Fri) March 27	(AUV-02-L-1) Fundamentals of Medical Ultrasonic Metrology and Instrumentation (2.0 h)	Dr. Kyungmin Baik
	(AUV-02-L-2) Thermal and Nonthermal effects of Biomedical Ultrasound (2.0 h)	Dr. Yong Tae Kim
	(AUV-02-L-3) Acoustic radiation conductance calibration of ultrasonic source transducer by radiation force balance (2.0 h)	Dr. Yong Tae Kim
DAY 8 (Mon) March 30	(AUV-02-L-5) Acoustic pressure field measurement by hydrophone scanning (2.0 h)	Dr. Yong Tae Kim
	(AUV-02-L-6) Acoustic properties of ultrasonic materials (1.5 h)	Dr. Yong Tae Kim / Dr. Hyunjin Lee
	(AUV-02-H-1) Hands-on Exercises (3.0 h) - Acoustic pressure field measurement and hydrophone calibration (substitution method)	Dr. Yong Tae Kim / Mr. Sung Mok Kim
DAY 9 (Tue) March 31	(AUV-02-L-7) Sound speed measurement of material in the ultrasonic frequency (1.5 h)	Dr. Hyunjin Lee
	(AUV-02-H-2) Hands-on Exercises (1.5 h) - Sound speed measurement of material in the ultrasonic frequency	Dr. Yong Tae Kim / Mr. Sung Mok Kim
AUV-03 (Day 9-10)	Vibration Measurement and Calibration	Mar 31(Tue)-Apr 01(Wed)
DAY 9 (Tue) March 31	(AUV-03-L-1) Basic Vibration Principles (1.5 h)	Dr. Sung-Soo Jung
	(AUV-03-L-2) Vibration Transducers (1.5 h)	Dr. Yong-Bong Lee
DAY 10 (Wed) April 01	(AUV-03-L-3) Calibration Principles of Vibration Transducers (1.5 h)	Dr. Yong-Bong Lee
	(AUV-03-L-4) Vibration Measurement Uncertainty (2.0 h)	Dr. Yong-Bong Lee
	(AUV-03-H-1) Hands-on Exercises (3.0 h) - Calibration of Vibration Transducers	Dr. Byung-Soo Jeon / Dr. Yong-Bong Lee
AUV	Performance Evaluation Test, Individual Lab Visits, Closing	April 02 (Thu)
DAY 11 (Thu) Apr 02	[Performance Evaluation Test]	GMA
	[Individual Visits to Laboratories]	Cener for Thermometry
	[Development/Presntation of Action Plans]	Participants, GMA
	Closing Session (Evaluation of the workshop, Certificate awarding)	UST
April 02-03 (Thu-Fri)	Departure: April 02(Thu) - 03 (Fri)	* Depending on the flight itinerary

Daily Program (Provisional)

Language of the course: English

Mar 20 (Fri)	Arrival at Daejeon, check-in at the Hotel Graytone	
Mar 21 (Sat)	Orientation Session	10:00-12:00
Mar 22 (Sun)	Free	
Mar 23 (Mon)	Opening & Metrology in General (MiG)	Tech. Service Bldg (Seminar RM #1, 1st floor)
08:30-09:00	From Hotel to KRISS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:00-09:45	Greetings and Introduction to KRISS and the GMA Course	
10:00-10:30	Opening session	
10:30-12:30	MiG-01 CIPMMRA: KC-CMC-Traceability in Measurement	Dr. Chu-Shik KANG, KRISS
12:30-14:00	Lunch	KRISS cafeteria (2nd floor)
14:00-16:30	MiG-02 Uncertainty in Measurement Revised SI with Fundamental Constants	Dr. Chu-Shik KANG, KRISS
16:30-17:00	From KRISS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
Mar 24 (Tue)	Metrology in General (MiG)	Tech. Service Bldg (Seminar RM #1, 1st floor)
08:30-09:00	From Hotel to KRISS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	MiG-03: Revised SI with Fundamental Constants	Dr. Seungnam PARK, KRISS
11:00-12:30	MiG-04: QMS Talk: why and for what - management/technical requirements (ISO/IEC17025)	Dr. Jookeun PARK, KRISS
12:30-14:00	Lunch	KRISS cafeteria (floor 2)
14:00-17:00	Presentation of Laboratory Reports	Participants
15:30-16:00	From KRISS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV-01	Acoustic Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Mar 25 (Wed)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	[AUV-01-L-1] Basic Theory of Acoustics	Dr. Sung-Soo Jung
11:00-12:30	[AUV-01-L-2] Calibration of Microphone Sensitivity	Dr. Wan-Ho Cho
12:30-14:00	Lunch	KRISS cafeteria (2nd floor)
14:00-17:00	[AUV-01-H-1] Hands-on Exercises - Calibration of Microphone Sensitivity	Dr. Jae-Gap-Suh / Dr. Wan-Ho Cho
17:00-17:30	From KRISS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV-01	Acoustic Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Mar 26 (Thu)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	[AUV-01-L-3] Calibration of Sound Calibrators and Sound Level Meter	Dr. Wan-Ho Cho
11:00-12:30	[AUV-01-L-4] Sound Power Measurement and Evaluation of Facility	Dr. Wan-Ho Cho
12:30-14:00	Lunch	KRISS cafeteria (2nd floor)
14:00-17:00	[AUV-01-H-2] Hands-on Exercises - Calibration of Sound Level Meter	Dr. Jae-Gap-Suh / Dr. Wan-Ho Cho
17:00-17:30	From KRISS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV-02	Ultrasound Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Mar 27 (Fri)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:30	[AUV-02-L-1] Fundamentals of Medical Ultrasonic Metrology and Instrumentation	Dr. Kyungmin Baik
11:30-12:30	[AUV-02-L-2] Thermal and Nonthermal effects of Biomedical Ultrasound	Dr. Yong Tae Kim
12:30-14:00	Lunch	KRISS cafeteria (2nd floor)
14:00-15:00	[AUV-02-L-2] Thermal and Nonthermal effects of Biomedical Ultrasound (continued)	Dr. Yong Tae Kim
15:00-17:00	[AUV-02-L-3] Acoustic radiation conductance calibration of ultrasonic source transducer by radiation force balance	Dr. Yong Tae Kim
17:30-18:00	From KRISS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
Mar 28 (Sat) Mar 29 (Sun)	FREE	GLOBAL METROLOGY ACADEMY

AUV-02	Ultrasound Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Mar 30 (Mon)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRIS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:30	[AUV-02-L-5] Acoustic pressure field measurement by hydrophone scanning	Dr. Yong Tae Kim
11:30-13:00	[AUV-02-L-6] Acoustic properties of ultrasonic materials	Dr. Yong Tae Kim / Dr. Hyung Jin Lee
13:00-14:00	Lunch	KRIS cafeteria (2nd floor)
14:00-17:00	[AUV-02-H-1] Hands-on Exercises - Acoustic pressure field measurement and hydrophone calibration (substitution method)	Dr. Yong Tae Kim / Mr. Sung Mok Kim
17:00-17:30	From KRIS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV-02	Ultrasound Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Mar 31 (Tue)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRIS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	[AUV-02-L-7] Sound speed measurement of material in the ultrasonic frequency	Dr. Hyungjin Lee
11:00-12:30	[AUV-02-H-2] Hands-on Exercises - Sound speed measurement of material in the ultrasonic frequency	Dr. Yong Tae Kim / Mr. Sung Mok Kim
12:30-14:00	Lunch	KRIS cafeteria (2nd floor)
AUV-03	Vibration Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
14:00-15:30	[AUV-03-L-1] Basic Vibration Principles	Dr. Sung-Soo Jung
15:30-17:00	[AUV-03-L-2] Vibration Transducers	Dr. Yong-Bong Lee
17:00-17:30	From KRIS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV-03	Vibration Measurement and Calibration	Tech. Service Bldg (Seminar RM #1, 1st floor)
Apr 1 (Wed)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRIS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	[AUV-03-L-3] Calibration Principles of Vibration Transducers	Dr. Yong-Bong Lee
11:00-12:30	[AUV-03-L-4] Vibration Measurement Uncertainty	
12:30-14:00	Lunch	KRIS cafeteria (2nd floor)
14:00-17:00	[AUV-03-H-1] Hands-on Exercises - Calibration of Vibration Transducers	Dr. Byung-Soo Jeon / Dr. Yong-Bong Lee
17:00-17:30	From KRIS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
AUV	Performance Evaluation Test, Individual Lab Visits, Closing	Tech. Service Bldg (Seminar RM #1, 1st floor)
Apr 2 (Thu)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRIS (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
09:30-11:00	[Performance Evaluation Test]	
11:00-12:30	[Individual Visits to Laboratories of further interest] - Q&A on matters of further interest to participants, including their Action Plans	participants will be divided into different groups by the subject of individual interest.
12:30-13:30	Lunch	KRIS cafeteria (2nd floor)
13:30-15:00	Elaboration/Presentations of Action plans	Participants, GMA
15:00-16:00	Evaluation of the course (written & oral)	
16:00-16:30	Closing session (certificate awarding)	
16:30-17:00	From KRIS to Hotel (* ride offered by the Hotel Graytone)	GMA (Sangwook Seo)
Apr 2-3 (Thu-Fri)	Departure (Apr 2-3)	* depending the flight itinerary of participants
* Participants are supposed to take the airport limousine bus bound for Incheon airport.		
* Ride to the bus stop near the Hotel Graytone will be provided by the Hotel Graytone in cooperation with GMA, KRIS.		
Dress code: Smart casual!		
Contact Points For further information about activity program, please contact: Sangwook SEO, Senior Coordinator, Global Metrology Academy (GMA), KRIS		swseo@kriss.re.kr

Qualification

1. The applicant should be duly nominated by the employer, whose official seal and signature should be put on the application/nomination form.
2. The applicant should be an employee of the national metrology institute (NMI) or measurement service laboratory at the time of application.
3. The applicant should be engaged in R&D and services in the subjects of workshop;
4. The applicant should be a university/college graduate or have equivalent professional career and knowledge on themes of the workshop.
5. For the sake of effectiveness, the applicant is required to have a good command of **English**.
6. The applicant should be healthy both physically and mentally enough to go through the whole programs of the workshop.

Requirements: applications are accepted by January 10, 2020 along with the following requirements.

1. **An official nomination** by the employer with the official seal and the signature of the top management of the employer;
2. A copy of the **curriculum vitae** of the applicant, describing the academic background and professional experience in detail;
3. A copy of **passport** as valid for more than six (6) months as of the expected date of arrival at Korea;
4. **Laboratory report and Action Plan:** Participants are supposed to submit their laboratory reports and draft action plans according to the template to be provided later on; and
5. Plan of sharing the results of his/her study in the GMA workshop for their institution and the nation.

Number of participants: each GMA workshop will be operated with around 10 participants.

Financial Arrangements

- Participants and their employers are responsible for paying all expenses of the tuition fees, airline tickets, accommodations and meals, etc. required for the participants' travel to and stay in Korea.
- Lunches for nine (9) working days are offered free to ALL participants.
- Subject to the availability of fund, additional financial assistance might be discussed for a limited number of people from developing countries.

1. Tuition fees	<p>① Amount: US\$750/US\$1,500 per person</p> <ul style="list-style-type: none"> ☞ Two different categories of the tuition fees are applicable according to the economic performance of the applicant's country. ☞ Please contact the coordinator, BEFORE making applications, to get confirmed of the tuition fee category applicable for you.
2. Banking information	<p>② Applicants are supposed to remit the tuition fees by bank transfer to the official bank account of KRISS.</p> <ul style="list-style-type: none"> ☞ Payment should be made by February 20, 2020 which will make the application complete. ☞ Please make sure that all the handling and banking charges raised both to the remitter and beneficiary should be paid by the remitter, so that the net amount of tuition fees (US\$750 or US\$1,500) could be received by KRISS.
	<p>③ Official bank account of KRISS</p> <ul style="list-style-type: none"> - Bank name: Kook-Min Bank (Branch: Yuseong Branch) - Swift code: CZNBKRSE - Account number: 461-01-0184-494 - Account holder's name: Korea Research Institute of Standards and Science (KRIS) - Bank address: 1F, #468-3, Bongmyeong-dong, Yuseong-gu, Daejeon, Republic of Korea ☞ invoices will not be issued separately if otherwise requested. (* Receipts might be issued upon the participant's arrival at KRIS.) ☞ The statement of bank transfer should be sent to KRIS either by Email (swseo@kriss.re.kr) or FAX (+82-42-868-5565) with attention to the GMA course coordinator.
2. Living expenses	<p>④ Participants are responsible for paying living expenses in Korea including accommodations and meals.</p>
	<p>⑤ For selected participants from the developing world, KRIS might provide free accommodations, subject to its financial availability.</p> <ul style="list-style-type: none"> ☞ Lunch for nine (9) working days will be offered free to ALL participants.
	<p>⑥ Please note that expenses for all other meals shall be paid by the participants.</p> <ul style="list-style-type: none"> ☞ Participants are advised to bring some pocket money of their own for incidental expenses.
	<p>⑦ It is likely that participants will stay at the Hotel Graytone, Dunsan in Daejeon. (http://www.graytone.co.kr/)</p> <ul style="list-style-type: none"> ☞ The room rate (around US\$55 per night per room) includes breakfast, tax, and service charge.
3. Airline tickets	<p>⑧ Participants and their employers are responsible for purchasing the airline tickets for the participants.</p>
4. Local Transportation	<p>⑨ The KRIS travel agent will pick up the participants upon their arrival at the Incheon (ICN) international airport of Seoul.</p> <ul style="list-style-type: none"> ☞ Participants are requested to advise the workshop coordinator of their flight itinerary to and from Korea AS SOON AS POSSIBLE.
	<p>⑩ The KRIS travel agent will help the participants to take the airport limousine bus bound for Daejeon.</p> <ul style="list-style-type: none"> ☞ The bus tickets (around US\$23 one way) are to be bought by the participants. ☞ Upon your arrival at the bus stop in Daejeon ("Government Complex-Daejeon"), the staff of the Hotel Graytone will be meeting you to take you to the hotel.

Every applicant and participant should commit to read, strictly abide by, and respect the following rules and regulations as specified below that GMA endorses in implementing the GMA courses:

1. Participants shall conduct themselves at all times in a manner compatible with their status as participants in the subject GMA course;
2. Participants shall attend, to the best of their abilities, all sessions of the GMA group and/or individual courses they are participating in;
3. Participants shall refrain from engaging in political activity or any form of employment for profit or gain;
4. Participants shall return to their home country upon completion of the subject course of GMA and resume work in their country;
5. Participants shall not extend the length of stay in Korea for personal convenience;
6. Participants whose flights are supported by GMA and other donor organizations are not permitted to change their flights for their personal convenience;
7. Participants shall not be accompanied by any member of their family;
8. Participants shall assume responsibility for any personal expenses incurred regardless of implementation of the course; and
9. Participants are required to strictly observe the course schedule and abide by the **rules and regulations stipulated by the KRIS and their sponsors, and by the laws of the Republic of Korea.**
10. Any form of harassment or insult, including but not limited to misconduct arising out of racial/ethnic, gender or class discrimination, whether it be physical or verbal, will not be tolerated and will be dealt with in accordance with the laws of the Republic of Korea and the rules and regulations of KRIS.
11. Especially, **sexual harassment** defined as a form of behavior characterized by sexually connotative words, acts or gestures that could undermine individual dignity and by which the victim takes offense, is regarded as a serious misconduct and will be dealt with accordingly.
12. Offenders who fail to comply with the above **Rules and Regulations** laws shall be subject to punishment in accordance with the laws of the Republic of Korea and the regulations of KRIS, **which include sending an official letter of complaint to the offender's employer and government and instant deportation with ban of the offender's participation in the future GMA programs.**



Applications and Inquiry!

For any further information about participation in the subject course and GMA programs, please contact:

Sangwook SEO Senior Coordinator, Global Metrology Academy (GMA), KRIS	swseo@kriss.re.kr TEL + 82-42-868-5440 Fax + 82-42-868-5565
Mr. Yunsuk HAN Coordinator, Global Metrology Academy (GMA), KRIS	han@kriss.re.kr TEL + 82-42-868-5531 Fax + 82-42-868-5565



Theme: Metrology in Analytical Chemistry [MAC]

Dates: June 15 (Mon) - June 24 (Wed), 2020

Venue: Korea Research Institute of Standards and Science (KRISS), Daejeon, Korea

Organized by: Global Metrology Academy (GMA), KRISS

Workshop Overview

[GMA-GT-2020-02-MAC]

Application: by March 20, 2020

The Global Metrology Academy of KRISS offers workshops to meet the needs of metrology HRD of the customers both at home and from abroad, who are responsible for metrology and related functions of national quality infrastructure of the nation. The workshop [GMA-GT-2020-02-MAC] is the second one scheduled to be offered in 2020. Its main theme is Metrology in Analytical Chemistry (MAC), to be presented in two (2) modules consisting of fundamentals of [metrology in Organic Analysis \(OA\) and Inorganic Analysis \(IA\)](#).

With its main target audience of [basic/intermediate levels](#) of metrologists in analytical chemistry, the MAC workshop will deliver them the concepts of the traceability and measurement standards along with other key subjects of metrology in analytical chemistry that participants need to obtain for their future career as leaders in their local and global metrology communities.

As an effort to yield as more practical benefit as possible for participants, each session of the MAC workshop is strategically designed that technical lectures are effectively combined with hands-on laboratory sessions to follow. By the end of the workshop, participants might have understanding of basic knowledge, skills, and information as up to dated on the key elements of metrology in analytical chemistry. In addition, participants will be given a chance to learn selected fundamental subjects of metrology in general, such as: QMS (ISO/IEC 17025, ISO 17034), reference materials (ISO guide 35), and the CIPM MRA requirements covering key comparison (KC), calibration and measurement capabilities (CMC), traceability and uncertainty in measurement.

Outline of Activity Program [Subject to Modification!*]**

Modules	Subjects of Program	Chief Lecturers
Orientation	Introduction of KRISS, GMA and Workshop (* to be offered for participants who will have arrived by Friday of the week just before opening)	GMA
MiG (Days 1)	Metrology in General - Four (4) lectures presenting the fundamentals of metrology and analytical chemistry	Dr. Jookeun PARK (jkpark@kriss.re.kr)
MiG (Day 2)	Presentation of Lab Reports by Participants - followed by an introduction to the University of Science and Technology (UST), Korea	GMA
MAC-OA (Days 4-5)	ORGANIC Analysis (OA)	Dr. Byungjoo KIM (byungjoo@kriss.re.kr)
MAC-IA (Days 8-9)	INORGANIC Analysis (IA)	Dr. Yong-Hyeon YIM (yhyim@kriss.re.kr)
MAC (Day 10)	Performance Evaluation test, Individual lab visits, Wrap-up & Closing	GMA

Official language of the activity program: [English](#)
(interpretation service is not available.)

Knowledge and skills to be obtained

At the end of the program, participants will become familiar with fundamental knowledge on the fundamental subjects of measurement standards, calibration and uncertainty in the fields of metrology in analytical chemistry including organic and inorganic analysis. Intensive laboratory sessions (ILS) are effectively combined with lectures and hands-on exercises in ways that enable participants to obtain basic skills required for offering quality services for customers. A two-day session of metrology in general (MiG) will offer participants broad perspectives that will help them grow up to take the leading role in advancing the nation-wide measurement system up to the international level.

Who should attend!

Metrologists who are working on R&D and services relating to the technical areas of measurement and analysis of metrology in chemistry.

Applications

Applications to be accepted by March 20, 2020

Contact Point: Application and Inquiry

For applications and further information about participation in the course, please contact:
Sangwook SEO, Senior Coordinator, Global Metrology Academy (GMA), KRISS
swseo@kriss.re.kr

Modules, Lectures, Hands-on Exercises

* *subject to modifications*

June 12 (Fri)	<i>Arrival at Daejeon, check-in at the Hotel Graytone in Daejeon</i>	<i>recommended date of arrival at Daejeon, Korea</i>
June 13 (Sat)	Orientation Session	10:00-12:00 (provisional)
June 14 (Sun)	Free	
MiG	Metrology in General: fundamentals of metrology and quality	June 15 (Mon) -17 (Wed)
	Seven (7) lectures and exercises (uncertainty evaluation)	Lecturers
DAY 1 (Mon) June 15	MiG-01: Metrology in Chemistry and Biology: an overview	Dr. Sook-Kyung KIM, KRIS
	MiG-02: QMS Talk: why and for what - management/technical requirements (ISO/IEC 17025, ISO 17034)	Dr. Jookeun PARK, KRIS
	MiG-03: ISO Guide 35:2006 RM- general and statistical principles for certification	Dr. Byungjoo KIM, KRIS
DAY 2 (Tue) June 16	MiG-04: CIPM MRA: KC-CMC-Traceability & Uncertainty in Measurement	Dr. Chu-Shik KANG, KRIS
DAY 3 (Wed) June 17	Presentation of Lab Reports	by participants
	Presentation of UST, University of Science and Technology	GMA, UST
MAC	Metrology in Analytical Chemistry	June 18 (Thu) - 19 (Fri), 22 (Mon)-23 (Tue)
	Intensive Laboratory Sessions (ILS) with lectures and exercises	(L) Lecture, (H) Hands-on exercises
MAC-OA	ORGANIC Analysis	June 18 (Thu)-19 (Fri)
DAY 4 (Thu) June 18	(OA-L-1) Overview of Organic Analysis Laboratory	Dr. Byungjoo KIM, KRIS
	(OA-L-2) Practical Approach for Establishing National Standards in Organic Analysis	Dr. Byungjoo KIM, KRIS
	(OA-H-1) Preparation and Verification of Primary Standard Solutions	Dr. Seonghee Ahn, Dr. Joonhee Lee, KRIS
	(OA-H-2) Preparation of Real Sample for Isotope Dilution Mass Spectrometry (IDMS)	Dr. Seonghee Ahn, Dr. Joonhee Lee, KRIS
	(OA-H-3) Instrumental Analysis of Prepared Samples (Overnight Run)	Dr. Seonghee Ahn, Dr. Joonhee Lee, KRIS
DAY 5 (Fri) June 19	(OA-H-4) Data Reduction of Instrumental Analysis Results	Dr. Seonghee Ahn, Dr. Joonhee Lee, KRIS
	(OA-L-3) Uncertainty Evaluation Method for Metrology in Organic Analysis	Dr. Byungjoo KIM, Dr. Seonghee Ahn, KRIS
	Wrap-up Discussion	Participants & Lecturers
DAY 6-7 (Sat-Sun) June 20-21	Free	
MAC-IA	INORGANIC Analysis	June 22 (Mon)-23 (Tue)
DAY 8 (Mon) June 22	(IA-L-1) Overview of Inorganic Analysis Laboratory	Dr. Yong-Hyeon YIM, KRIS
	(IA-L-2) Elemental Standard Solutions	Dr. Sung Woo HEO, KRIS
	(IA-H-1) Preparation & Certification of Elemental Standard Solutions	Mr. Hyung-Sik MIN & Mr. Myungsub Han, KRIS
DAY 9 (Tue) June 23	(IA-L-3) Introduction to Matrix CRMs and Their Production	Dr. Kyoung-Seok LEE, KRIS
	(IA-L-4) Certification and Uncertainty Evaluation of Matrix CRM by ID-ICPMS	Dr. Jong Wha LEE, KRIS
	(IA-H-2) Matrix CRM Production & ID-ICPMS Certification	Dr. Kyoung-Seok LEE, Dr. Jong Wha LEE, KRIS Ms. Youngran LIM, Mr. Myung Chul LIM, KRIS
MAC	Wrap-up and Closing	June 24 (Wed)
DAY 10 (Wed) June 24	Performance evaluation test	Participants & Lecturers
	[Individual Lab Visits]	Center for Analytical Chemistry
	Closing session	Participants, GMA
June 25 (Thu)	<i>Departure: June 24 (Wed) - 25 (Thu)</i>	<i>* Depending on the flight itinerary</i>

* ISO/IEC 17025: 2005 General requirements for the competence of testing and calibration laboratories

* ISO 17034 : 2017 General requirements for the competence of RM producers

* ISO Guide 35: 2006 Reference materials - general and statistical principles for certification


Daily Program (Provisional)

Language of the course: **English**

June 12 (Fri)~	Arrival at ICN airport, down to Daejeon, Check-in at the Hotel Graytone	
June 13 (Sat) 10:00-17:00	Orientation & Brief tour in and around Daejeon city <small>(for participants who will have arrived at Daejeon by Friday, Mar 18)</small>	* ride & lunch to be offered by KRISS
June 14 (Sun)	FREE	
June 15 (Mon)	Opening & Metrology in General (MiG)	Seminar room (CRM Lab Bldg. 2nd floor)
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:00-09:40	Greetings and Introduction to KRISS and the GMA Course	
10:00-10:30	Opening ceremony	Seminar room (CRM Lab Bldg. 2nd floor)
10:30-12:00	MiG-1: Metrology in Chemistry and Biology: an overview	Dr. Sook-Kyung KIM
12:00-13:30	Lunch	KRISS cafeteria (floor 2)
13:30-15:00	MiG-2: QMS Talk: why and for what - management/technical requirements with ISO/IEC 17025, ISO 17034	Dr. Jookeun PARK
15:00-17:00	MiG-3: ISO Guide 35: 2006 RM - general and statistical principles for certification	Dr. Byungjoo KIM
17:00-17:30	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 16 (Tue)	Metrology in General (MiG)	Seminar room (CRM bldg. 2nd floor)
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-12:00	MiG-4: CIPM MRA: KC-CMC-Traceability & Uncertainty in Measurement	Dr. Chu-Shik KANG
12:00-13:30	Lunch	KRISS cafeteria (floor 2)
13:30-16:30	MiG-5: CIPM MRA: KC-CMC-Traceability & Uncertainty in Measurement	Dr. Chu-Shik KANG
16:30-17:00	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 17 (Wed)	Metrology in General (MiG)	Seminar room (CRM bldg. 2nd floor)
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-12:00	Presentation of Lab Reports (Q&A incl.)	Participants
12:00-13:30	Lunch	KRISS cafeteria (floor 2)
13:30-14:30	Presentation of Lab Reports (Q&A incl.)	Participants
14:30-15:30	Presentation of University of Science and Technology (UST), Korea	UST
15:30-16:00	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
MAC-OA	ORGANIC Analysis	Seminar room (CRM bldg. 2nd floor)
June 18 (Thu)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-10:30	(OA-L-1) Overview of Organic Analysis Laboratory	Dr. Byungjoo KIM
10:30-12:30	(OA-L-2) Practical Approach for Establishing National Standards in Organic Analysis	Dr. Byungjoo KIM
12:30-14:00	Lunch	KRISS cafeteria (floor 2)
14:00-17:00	(OA-H-1) Preparation and Verification of Primary Standard Solutions (OA-H-2) Preparation of Real Sample for Isotope Dilution Mass Spectrometry (IDMS) (OA-H-3) Instrumental Analysis of Prepared Samples (Overnight Run)	Dr. Seonghee Ahn/Dr. Joonhee Lee
17:00-17:30	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 19 (Fri)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-11:00	(OA-H-4) Data Reduction of Instrumental Analysis Results	Dr. Seonghee Ahn/Dr. Joonhee Lee
11:00-12:30	(OA-L-3) Uncertainty Evaluation Method for Metrology in Organic Analysis	Dr. Byungjoo KIM/Dr. Seonghee Ahn
12:30-14:00	Lunch	KRISS cafeteria (floor 2)
14:00-16:00	(OA-L-3) Uncertainty Evaluation Method for Metrology in Organic Analysis (continued)	Dr. Byungjoo KIM/Dr. Seonghee Ahn
16:00-17:00	Wrap-up Discussion	Dr. B KIM/Dr. S Ahn/Dr. J Lee
17:00-17:30	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 20-21 (Sat-Sun)	Free	

Daily Program (Provisional)

Language of the course: English

Mic-IA	INORGANIC Analysis	Seminar room (CRM bldg. 2nd floor)
June 22 (Mon)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-11:00	(IA-L-1) Overview of Inorganic Analysis Laboratory	Dr. Yong-Hyeon YIM
11:00-12:30	(IA-L-2) Preparation and Certification of Elemental Standard Solutions	Dr. Sung Woo HEO
12:30-14:00	Lunch	KRISS cafeteria (floor 2)
14:00-17:00	(IA-H-1) Preparation & Certification of Elemental Standard Solutions	Mr. Hyung-Sik MIN & Mr. Myungsub HAN
17:00-17:30	From KRISS to Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 23 (Tue)	Lectures (L), Hands-on Exercises (H)	Hands-on session: Laboratories in charge
08:30-09:00	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-10:00	(IA-L-3) Introduction to Matrix CRMs and Their Production	Dr. Kyoung-Seok LEE
10:00-12:30	(IA-L-4) Certification and Uncertainty Evaluation of Matrix CRM by ID-ICPMS	Dr. Jong Wha LEE
12:30-14:00	Lunch	KRISS cafeteria (floor 2)
14:00-17:00	(IA-H-2) Matrix CRM Production & ID-ICPMS Certification	Dr. Kyoung-Seok LEE/Dr. Jong Wha LEE/Ms. Youngran LIM/Mr. Myung Chul LIM
17:00-17:30	From KRISS to the Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 24 (Wed)	Performance Evaluation Test, Individual Lab Visits, Closing	Seminar room (CRM bldg. 2nd floor)
09:00-09:30	From Hotel to KRISS (* ride offered by KRISS)	GMA (Sangwook Seo)
09:30-11:00	Performance Evaluation Test	
11:00-12:30	[Individual Visits to Laboratories of further interest] - Q&A on matters of further interest to participants, including their Action Plans	participants will be divided into different groups by the subject of individual interest.
12:30-13:30	Lunch	
13:30-14:30	Evaluation of the course (written and oral)	KRISS cafeteria (floor 2)
14:30-15:00	Closing ceremony (certificate awarding)	Seminar room (CRM bldg. 2nd floor)
15:00-15:30	Return to the Hotel (* ride offered by KRISS)	GMA (Sangwook Seo)
June 25 (Thu)	Departure: June 24 (Wed) - 25 (Thu)	<i>depending the flight itinerary of participants</i>
	* Participants are supposed to take the airport limousine bus bound for Incheon airport.	
	* Ride to the bus stop near the hotel will be provided by the Hotel Graytone in cooperation with GMA, KRISS.	
Dress code: Smart casual!		
Contact Points For further information about activity program, please contact: Sangwook SEO, Senior Coordinator, Global Metrology Academy (GMA), KRISS		swseo@kriss.re.kr 

Qualification

1. The applicant should be duly nominated by the employer, whose official seal and signature should be put on the application/nomination form.
2. The applicant should be an employee of the national metrology institute (NMI) or measurement service laboratory at the time of application.
3. The applicant should be engaged in R&D and services in the subjects of workshop;
4. The applicant should be a university/college graduate or have equivalent professional career and knowledge on themes of the workshop.
5. For the sake of effectiveness, the applicant is required to have a good command of **English**.
6. The applicant should be healthy both physically and mentally enough to go through the whole programs of the workshop.

Requirements: applications are accepted by March 20, 2020, along with the following requirements.

1. **An official nomination** by the employer with the official seal and the signature of the top management of the employer;
2. A copy of the **curriculum vitae** of the applicant, describing the academic background and professional experience in detail;
3. A copy of **passport** as valid for more than six (6) months as of the expected date of arrival at Korea;
4. **Laboratory report and Action Plan:** Participants are supposed to submit their laboratory reports and draft action plans according to the template to be provided later on; and
5. Plan of sharing the results of his/her study in the GMA workshop for their institution and the nation.

Number of participants: each course will be operated with around 10 participants.

Financial Arrangements

- Participants and their employers are responsible for paying all expenses of the tuition fees, airline tickets, accommodations and meals, etc. required for the participants' travel to and stay in Korea.
- Lunches for eight (8) working days are offered free to ALL participants.
- Subject to the availability of fund, additional financial assistance might be discussed for a limited number of people from developing countries.

1. Tuition fees	<p>① Amount: US\$750/US\$1,500 per person</p> <ul style="list-style-type: none"> ↳ Two different categories of the tuition fees are applicable according to the economic performance of the applicant's country. ↳ Please contact the coordinator, BEFORE making applications, to get confirmed of the tuition fee category applicable for you.
2. Banking information	<p>② Applicants are supposed to remit the tuition fees by bank transfer to the official bank account of KRISS.</p> <ul style="list-style-type: none"> ↳ Payment should be made by April 30, 2020 which will make the application complete. ↳ Please make sure that all the handling and banking charges raised both to the remitter and beneficiary should be paid by the remitter, so that the net amount of tuition fees (US\$750 or US\$1,500) could be received by KRISS. <p>③ Official bank account of KRISS</p> <ul style="list-style-type: none"> - Bank name: Kook-Min Bank (Branch: Yuseong Branch) - Swift code: CZNBKRSE - Account number: 461-01-0184-494 - Account holder's name: Korea Research Institute of Standards and Science (KRISS) - Bank address: 1F, #468-3, Bongmyeong-dong, Yuseong-gu, Daejeon, Republic of Korea ↳ invoices will not be issued separately if otherwise requested. (* Receipts might be issued upon the participant's arrival at KRISS.) ↳ The statement of bank transfer should be sent to KRISS either by Email (swseo@kriss.re.kr) or FAX (+82-42-868-5565) with attention to the course coordinator.
2. Living expenses	<p>④ Participants are responsible for paying living expenses in Korea including accommodations and meals.</p> <p>⑤ For selected participants from the developing world, KRISS might provide free accommodations, subject to its financial availability.</p> <ul style="list-style-type: none"> ↳ Lunches for eight (8) working days will be offered free to ALL participants. <p>⑥ Please note that expenses for all other meals shall be paid by the participants.</p> <ul style="list-style-type: none"> ↳ Participants are advised to bring some pocket money of their own for incidental expenses. <p>⑦ It is likely that participants will stay at the Hotel Graytone, Dunsan in Daejeon. (http://www.graytone.co.kr/)</p> <ul style="list-style-type: none"> ↳ The room rate (around US\$55 per night per room) includes breakfast, tax, and service charge.
3. Airline tickets	<p>⑧ Participants and their employers are responsible for purchasing the airline tickets for the participants.</p>
4. Local Transportation	<p>⑨ The KRISS travel agent will pick up the participants upon their arrival at the Incheon (ICN) international airport of Seoul.</p> <ul style="list-style-type: none"> ↳ Participants are requested to advise the activity coordinator of their flight itinerary to and from Korea AS SOON AS POSSIBLE. <p>⑩ The KRISS travel agent will help the participants to take the airport limousine bus bound for Daejeon.</p> <ul style="list-style-type: none"> ↳ The bus tickets (around US\$23 one way) are to be bought by the participants. ↳ Upon your arrival at the bus stop in Daejeon ("Government Complex-Daejeon"), the staff of the Hotel Graytone will be meeting you to take you to the hotel.

Every applicant and participant should commit to read, strictly abide by, and respect the following rules and regulations as specified below that GMA endorses in implementing the GMA courses:

1. Participants shall conduct themselves at all times in a manner compatible with their status as participants in the subject GMA course;
2. Participants shall attend, to the best of their abilities, all sessions of the GMA group and/or individual courses they are participating in;
3. Participants shall refrain from engaging in political activity or any form of employment for profit or gain;
4. Participants shall return to their home country upon completion of the subject course of GMA and resume work in their country;
5. Participants shall not extend the length of stay in Korea for personal convenience;
6. Participants whose flights are supported by GMA and other donor organizations are not permitted to change their flights for their personal convenience;
7. Participants shall not be accompanied by any member of their family;
8. Participants shall assume responsibility for any personal expenses incurred regardless of implementation of the course; and
9. Participants are required to strictly observe the course schedule and abide by the rules and regulations stipulated by the KRISS and their sponsors, and by the laws of the Republic of Korea.
10. Any form of harassment or insult, including but not limited to misconduct arising out of racial/ethnic, gender or class discrimination, whether it be physical or verbal, will not be tolerated and will be dealt with in accordance with the laws of the Republic of Korea and the rules and regulations of KRISS.
11. Especially, sexual harassment , defined as a form of behavior characterized by sexually connotative words, acts or gestures that could undermine individual dignity and by which the victim takes offense, is regarded as a serious misconduct and will be dealt with accordingly.
12. Offenders who fail to comply with the above Rules and Regulations laws shall be subject to punishment in accordance with the laws of the Republic of Korea and the regulations of KRISS, which include sending an official letter of complaint to the offender's employer and government and instant deportation with ban of the offender's participation in the future GMA programs.

To be a most
Productive & Friendly
Partner in Metrology HRD

FOR
THE metrologists of
NEXT generations

Applications and Inquiry!

For any further information about participation in the subject course and GMA programs, please contact:

Sangwook SEO Senior Coordinator, Global Metrology Academy (GMA), KRISS	swseo@kriss.re.kr TEL + 82-42-868-5440 Fax + 82-42-868-5565
Mr. Yun Suk HAN Coordinator, Global Metrology Academy (GMA), KRISS	han@kriss.re.kr TEL + 82-42-868-5531 Fax + 82-42-868-5565