

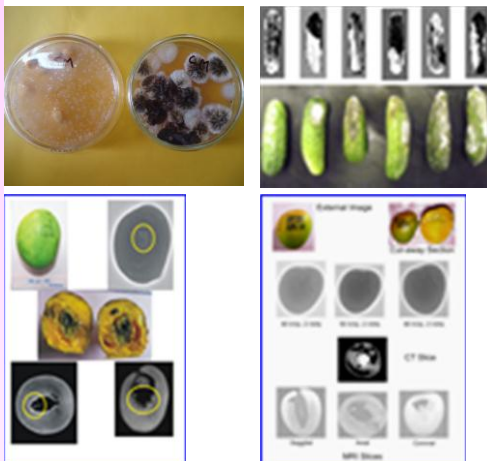
## On-Line Application Process

As per the ICAR instructions, the interested candidates should register and apply online through 'Capacity Building Programme' (CBP) portal as follows:

1. Visit the website <http://www.iasri.res.in/cbp/> or click on Capacity Building Programme link under <http://www.icar.org.in/>
2. Login using your user ID and Password. To create user ID use "Create New Account" link.
3. After login, click on "Participate in Training" link and fill the Performa.
4. Take a printout and send duly signed copy through proper channel to the Course Director of Summer School by post along with registration fee as per the address and contact details given overleaf. Please free to contact the Course Director for any assistance. The last date for receiving the nomination is 31<sup>st</sup> May, 2017. The advance scanned copy of the nomination may be sent by e-mail.

## Registration Fees

The participants are required to pay a sum of Rs. 50/- (Rupees Fifty only) as registration fee (Non-refundable) along with the completed application in the form of Demand Draft drawn in favour of ICAR UNIT, CIAE BHOPAL payable at Bhopal.



## Address for Correspondence

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## Important Dates

Last date for receipt of applications : 31.05.2017  
Intimation to selected candidates : 05.06.2017  
Confirmation by selected candidates : 20.06.2017

## Announcement cum information brochure

for  
ICAR Sponsored  
Summer School  
on

Analytical, Instrumental and Imaging  
Techniques Relevant to Food Safety  
Management

July 06-26, 2017



Organized by



**AGRO PRODUCE PROCESSING DIVISION**  
ICAR-Central Institute of Agricultural Engineering  
Nabi Bagh, Berasia Road, Bhopal-462038 M.P. India

## Host Institute

The ICAR-Central Institute of Agricultural Engineering (CIAE) is a premier Institute in the country to conduct basic, applied and adaptive research in agricultural engineering. Human resource development by organizing specialized training courses for different stakeholders is a major commitment of the Institute. The Institute has the facilities to undertake R&D activities in the areas of Agro-processing & food technology, soybean processing and utilization, farm mechanization, conservation agriculture, irrigation and drainage engineering, energy production & management,. The farm land of 93 ha, workshop facilities and library supports the research and development works of the institute. The Institute campus is located on Berasia Road and is 7 km from Bhopal railway station and 8 km from airport. The Summer School falls during end of summer season, with an ambient temperature around 25-30°C. Umbrella/ raincoats may be required.

## Information on Summer School

With growing public awareness regarding safe food, food quality assurance systems are becoming more stringent. Food safety has become an important food quality attributes and one of the key features in deciding the food economics. The food safety issues start much before the food is even produced and continues till it reaches the consumers gut before going through a long path of production, processing, storage, handling and in many of the cases, domestic storage and cooking. Therefore, it is imperative to monitor and control the quality of food before it becomes a health hazard and impact the global economics.

This course shall include analytical, spectroscopic, instrumental and imaging techniques for measurement of food quality and safety. The relevant measurement techniques range instrumental quality analysis to advanced non-destructive measurement systems including x-ray and hyperspectral imaging and from biochemical, microbial, molecular techniques to sensory analysis. Sensors, e-tongue, e-nose, imaging system have now coming up commercially to monitor the food quality and safety and they are going to be in vogue in coming days. These emerging technologies will also be covered to the fullest possible extent during the summer school.

## Objectives

The objective of the proposed summer school is to make the participants aware of new developments in analytical, instrumental and imaging techniques for food quality and safety measurements including both destructive and non-destructive methods.

## Course Contents

The course contents include lectures, hands-on practical and relevant visits related to topics listed below:

- Instrumental quality evaluation techniques
- Sensors and protocols for sustainable food safety
- Recent advances in emerging imaging techniques for non-destructive detection of food quality and safety
- Sensory evaluation techniques for food products
- e-nose and e-tongue for food quality and safety determination
- Molecular techniques for food toxin detection
- Pathogens and toxins in food and their detection methods
- Microbial evaluation of food
- Sampling techniques and statistical methods
- Active and intelligent food packaging for food safety concerns
- Mycotoxin control strategies in stored agricultural commodities
- Novel Processing Technologies for food safety
- HACCP and CIP in food production line
- Food laws and regulations related to food safety

## Eligibility

The training programme is open to Scientists/Teachers/Subject Matter Specialists/ Professionals of ICAR Institutes/CAU/SAUs/KVKs involved in research, development and extension programmes. A maximum of 25 participants will be selected based on their experience and area of work. One to two participants may be sponsored from each Institute / Organization.

The eligibility criteria for the course are:

- Master's degree in Agricultural Engineering / Food Process Technology / Food Engineering / Dairy Engineering/ Postharvest Technology/ Food science/ Any other relevant discipline from any of the recognized university.

- Working in a position not below the rank of Scientist / Assistant Professor / Lecturer / Subject Matter Specialists or Equivalent.

## How to Apply?

The applicants may see the guidelines available at the web site for the summer school at <http://iasri.res.in/cbp/ToDownload/Guidelines%20to%20participate%20in%20training%20program.pdf> and also **send their applications through proper channel** in the prescribed format to The Course Director, Summer School on 'Analytical, Instrumental and Imaging Techniques Relevant to Food Safety Management', ICAR-Central Institute of Agricultural Engineering, Bhopal-38. The last date for the receipt of the nomination is 31<sup>st</sup> May 2017. The selected candidates will be informed by 5<sup>th</sup> June 2017.

## Boarding and Lodging

Free lodging and boarding will be provided to the participants as per the approved ICAR norms. The Institute has a furnished guesthouse/ hostel with dining, recreation and medical facilities in the campus. Please note that, strictly no accommodation in the guest house will be provided to the family members or guests of the participants.

## Travel

Participants will be paid travel fare to and fro through the shortest route from their respective institution to CIAE, Bhopal and back for journey by AC-II class train fare or bus as the case may be. TA to be paid on production of a certificate or tickets by the participant. No air fare will be provided.

## How to Reach CIAE

Bhopal is well connected by air, rail and road. Pre-paid auto rickshaw and taxi can be availed at railway station to reach CIAE Bhopal campus.

