



सत्यमेव जयते

Department of Science & Technology  
Govt. of India

**HANDS-ON TRAINING COURSE**  
**APPLICATION OF ADVANCED ANALYTICAL INSTRUMENTS IN AGRICULTURE**  
**(WORKSHOP ON ANALYTICAL METHODS)**

Under  
**Synergistic Training Program Utilizing the Scientific and Technological  
Infrastructure (STUTI)**

**Date: 17<sup>th</sup> May –24<sup>th</sup> May 2022**



**ORGANIZED BY**  
**PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA**

**IN ASSOCIATION WITH**  
**SOPHISTICATED ANALYTICAL INSTRUMENTATION FACILITY,**  
**PANJAB UNIVERSITY, CHANDIGARH**

**Er. S.S. KOHLI**  
**Scientist G and Head, R&D Infrastructure Division, DST**

**Chairperson**  
**DR. A.S. DHATT**  
**Director of Research,**  
**PAU, Ludhiana**

**Course Director**  
**DR. G.S. MANGAT**  
**ADR (Crop Improvement),**  
**PAU, Ludhiana**

**STUTI Program Coordinator, PMU**  
**PROF. G.R. CHAUDHARY**  
**Director SAIF/CIL,**  
**PU, Chandigarh**

**Course Coordinator**  
**DR. POONAM A. SACHDEV**  
**Head, Deptt. of Food Science and Technology,**  
**PAU, Ludhiana**

**Course Coordinator**  
**DR. DHANWINDER SINGH**  
**Principal Soil Chemist,**  
**Deptt. of Soils, PAU, Ludhiana**

**Course Co-Coordinator**  
**DR. ACHLA SHARMA**  
**Principal Wheat Breeder,**  
**Deptt. of Plant Breeding and Genetics,**  
**PAU, Ludhiana**

**Course Co-Coordinator**  
**DR. MANDEEP HUNJAN**  
**Principal Plant Bacteriologist,**  
**Deptt. of Plant Pathology,**  
**PAU, Ludhiana**

**Course Co-Coordinator**  
**DR. VIJAY KUMAR**  
**Principal Entomologist,**  
**Deptt. of Entomology,**  
**PAU, Ludhiana**

**Course Co-Coordinator**  
**DR. ABHISHEK SHARMA**  
**Principal Virologist,**  
**Deptt. of Vegetables,**  
**PAU, Ludhiana**

**Contact persons: Dr. Jaspreet Kaur: +91 9915141584; Dr. Sukhpreet Kaur: +91 9988317979**  
**e-mail: [paustuti@gmail.com](mailto:paustuti@gmail.com)**

## ORGANIZERS



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**“Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI) Program – 2022”**

**STUTI Program of the Department of Science & Technology (DST), Government of India, is intended to build human resource and its knowledge through open access to S & T Infrastructure across the country. This will be achieved by organizing short term courses/workshops on the awareness, use and application of various instruments and analytical techniques. The Scheme will provide grants for organizing training programs including boarding and lodging for participants, honorarium for the faculty, training material/ kit.**

## **Program cost**

- This hands-on training is funded by DST STUTI program and registration is free of cost. Reimbursement for train fare to the participating candidates from outstations will be provided as per their entitlement.
- Adjustment for the accommodation of the candidates will be made by university depending on the availability.
- Participating candidates should make request for the accommodation during registration process.

## **Registration**

Participants are required to apply for the training program by sending an email to [paustuti@gmail.com](mailto:paustuti@gmail.com) along with their Biodata in the format given at the end of the brochure. The application deadline is 13<sup>th</sup> May 2022.

## **Selection of candidates**

The applications received shall be scrutinized as per eligibility of participants by the STUTI training program selection committee and decision of the committee will be final. Selected candidates will be notified through E-mail. The number of seats in the training program are limited.

**Day 1, Tuesday**

**Date: 17.05.2022**

**10:00 am -11:00 am WELCOME AND INAUGURATION**

**11:00 am -11:30 am ADDRESS BY THE CHIEF GUEST**

**Er. S.S. KOHLI**  
Scientist 'G' and Head, R&D  
Infrastructure Division, DST

**11:30 am - 12:00 pm TEA BREAK**

**12:00 - 1:00 pm ABOUT THE STUTI PROGRAM**

**PROF. G.R. CHAUDHARY**

**1:00 pm - 2:00 pm LUNCH**

**BREEDING WHEAT, RICE AND PULSES FOR QUALITY PARAMETERS, END PRODUCT SPECIFICITY AND BIOFORTIFICATION**

**RESOURCE PERSON**

**2:00 pm-3:00 pm BREEDING WHEAT FOR QUALITY PARAMETERS, END PRODUCT SPECIFICITY AND BIOFORTIFICATION**

**DR. ACHLA SHARMA**

**3:00 pm-5:00 pm HANDS-ON TRAINING: QUALITY PARAMETERS FOR WHEAT**

**DR. ACHLA SHARMA**

**DR. LENIKA KASHYAP**



**Day 2, Wednesday**

**Date: 18.05.2022**

**BREEDING WHEAT, RICE AND PULSES FOR QUALITY PARAMETERS, END PRODUCT SPECIFICITY AND BIOFORTIFICATION**

**RESOURCE PERSON**

<b>10:00 am-11:15 am</b>	<b>BREEDING RICE FOR QUALITY PARAMETERS, END PRODUCT SPECIFICITY AND BIOFORTIFICATION</b>	<b>DR. RUPINDER KAUR</b>
<b>11:15 am-11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am -1:00 pm</b>	<b>HANDS-ON TRAINING: QUALITY PARAMETERS FOR RICE</b>	<b>DR. RUPINDER KAUR</b> <b>DR. NEERJA SHARMA</b>
<b>1:00 pm-2:00 pm</b>	<b>LUNCH</b>	
<b>2:00 pm-5:00 pm</b>	<b>HANDS-ON TRAINING: QUALITY PARAMETERS FOR PULSES</b>	<b>DR. INDERJIT SINGH</b> <b>DR. SATVIR KAUR</b>



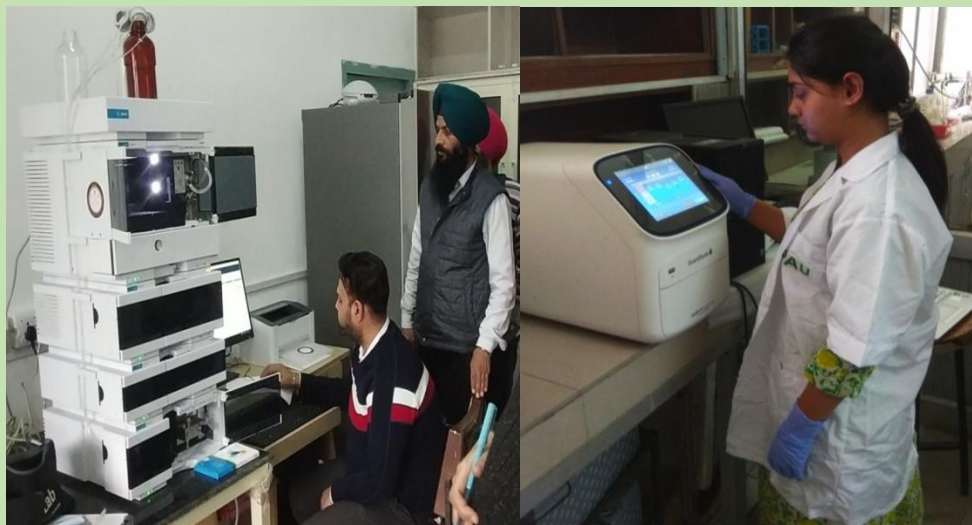
**Day 3, Thursday**

**Date: 19.05.2022**

**ROLE OF HORTICULTURAL CROPS IN DIVERSIFICATION OF AGRICULTURE AND HUMAN HEALTH**

**RESOURCE PERSON**

<b>10:00 am-11:15 am</b>	<b>ORIENTATION AND ACQUAINTANCE WITH SOPHISTICATED INSTRUMENTS/FACILITIES CREATED UNDER PURSE//FIST</b>	<b>DR. JASWINDER BRAR, DR. ANIRUDH THAKUR &amp; DR. ABHISHEK SHARMA</b>
<b>11:15 am - 11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am-1:00 pm</b>	<b>SAMPLE HANDLING AND PREPARATION</b>	<b>DR. JASWINDER BRAR, DR. ANIRUDH THAKUR &amp; DR. ABHISHEK SHARMA</b>
<b>1:00 pm-2:00 pm</b>	<b>LUNCH</b>	
<b>2:00 pm-5:00 pm</b>	<b>HANDS-ON TRAINING: PROFILING OF SUGARS, ACIDS, VITAMIN B COMPLEX AND VITAMIN C</b>	<b>DR. ABHISHEK SHARMA, DR. JASWINDER BRAR &amp; DR. ANIRUDH THAKUR</b>





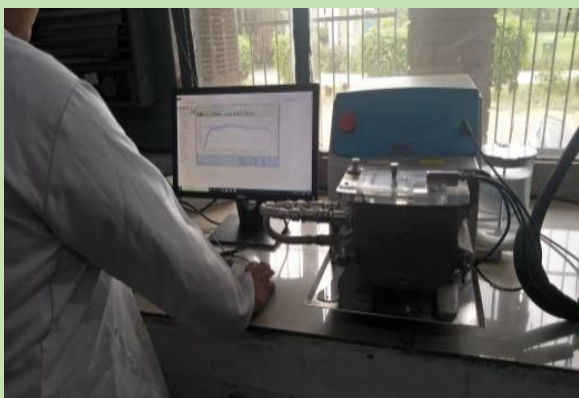
**Day 4, Friday**

**Date: 20.05.2022**

**RHEOLOGICAL MEASUREMENTS IN FOODS**

**RESOURCE PERSON**

<b>10:00 am-10:15 am</b>	<b>INTRODUCTION TO PROCESSING AND ANALYSIS FACILITIES IN DEPTT. OF FOOD SCIENCE AND TECHNOLOGY</b>	<b>DR. POONAM A. SACHDEV</b>
<b>10:15 am-11:15 am</b>	<b>RHEOLOGICAL MEASUREMENTS: APPLICATIONS IN FOODS</b>	<b>DR. JASPREET KAUR</b>
<b>11:15 am-11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am-1:00 pm</b>	<b>AN INSIGHT INTO THE RHEOLOGICAL BEHAVIOUR OF VEGETABLE PRODUCTS</b>	<b>DR. SUKHPREET KAUR</b>
<b>1:00 pm-2:00 pm</b>	<b>LUNCH</b>	
<b>2:00 pm-5:00 pm</b>	<b>SAMPLE PREPARATION</b>	<b>DR. JASPREET KAUR</b>
	<b>HANDS -ON TRAINING ON MEASUREMENT OF RHEOLOGICAL PROPERTIES IN FLUIDS AND CEREAL DOUGHS</b>	<b>DR. SUKHPREET KAUR</b>



**Day 5, Saturday**

**Date: 21.05.2022**

**DEVELOPING ECO-FRIENDLY STRATEGIES FOR MANAGEMENT OF MAJOR INSECT PESTS IN FIELD CROPS**

**RESOURCE PERSON**

<b>10:00 am-11:15 am</b>	<b>ECO-FRIENDLY STRATEGIES FOR MANAGEMENT OF MAJOR INSECT PESTS IN FIELD CROPS</b>	<b>DR. VIJAY KUMAR DR. K.S. SURI</b>
<b>11:15 am-11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am-1:00 pm</b>	<ul style="list-style-type: none"><li>- IDENTIFICATION OF POTENTIAL GENE (S) FOR MANAGEMENT OF MAJOR INSECT PESTS</li><li>- MONITORING OF PESTICIDE RESIDUE</li></ul>	<b>DR. VIKAS JINDAL  DR. SMRITI SHARMA</b>
<b>1:00 pm -2:00 pm</b>	<b>LUNCH</b>	
<b>2:00 pm - 3:00 pm</b>	<ul style="list-style-type: none"><li>- CLIMATE RESILIENT IPM TECHNOLOGY</li></ul>	<b>DR. MANMEET BRAR BHULLAR</b>
<b>3:00 pm - 5:00 pm</b>	<ul style="list-style-type: none"><li>- HARNESSING POTENTIAL OF BEE KEEPING</li></ul>	<b>DR. JASPAL SINGH</b>





**Day 6, Monday**

**Date: 23.05.2022**

**NOVEL INSIGHTS INTO DNA FINGERPRINTING AND STRAIN TYPING IN PLANT PATHOGENIC BACTERIA**

**RESOURCE PERSON**

<b>10:00 am - 10:10 am</b>	<b>INTRODUCTION TO THE DEPARTMENT OF PLANT PATHOLOGY AND PLANT BACTERIOLOGY LAB</b>	<b>DR N.K. DHILLON, HOD</b>
<b>10:10am - 10:40am</b>	<b>CONCEPT INTRODUCTION- STRAIN TYPING USING BACTERIAL TAL EFFECTOR/AVR GENES AND CRISPR SEQUENCES</b>	<b>DR MANDEEP HUNJAN</b>
<b>10:40 am - 11:15 am</b>	<b>IN SILICO IDENTIFICATION OF CANDIDATE TAL EFFECTOR/AVR GENES AND CRISPR SEQUENCES</b>	<b>DR MANDEEP HUNJAN DR PARMINDER TAK DR YESMIN KAUR</b>
<b>11:15 am -11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am – 1:00 pm</b>	<b>SETTING UP A PCR REACTION</b>	<b>DR MANDEEP HUNJAN DR PARMINDER TAK DR YESMIN KAUR</b>
<b>1:00 pm to 2:00 pm</b>	<b>LUNCH BREAK</b>	
<b>2:00 pm to 5:00 pm</b>	<b>1. RESOLVING ON GEL, SEQUENCING AND SEQUENCE ANALYSIS</b>	<b>DR YESMIN KAUR DR MANDEEP HUNJAN</b>
	<b>2. SELECTION OF CANDIDATE GENES/SEQUENCES</b>	<b>DR MANDEEP HUNJAN</b>
	<b>3. DISCUSSION</b>	<b>DR MANDEEP HUNJAN DR PARMINDER TAK DR YESMIN KAUR</b>



**Day, 7 Tuesday**

**Date: 24.05.2022**

**HANDS-ON TRAINING ON USE OF STATE-OF-THE-ART INSTRUMENTS**

**RESOURCE PERSON**

<b>10:00 am-11:15 am</b>	<b>METHOD OF SAMPLE COLLECTION AND DETERMINATION OF GREENHOUSE GAS EMISSIONS IN AGRICULTURE</b>	<b>DR. G. S DHERI/ MS. MANJIT KAUR</b>
<b>11:15 am-11:30 am</b>	<b>TEA BREAK</b>	
<b>11:30 am-1:00 pm</b>	<b>APPLICATION OF UV-VIS SPECTROPHOTOMETER IN SOIL PLANT AND WATER ANALYSIS</b>	<b>DR. GAZALA NAZIR</b>
<b>1:00 pm-2:00 pm</b>	<b>LUNCH</b>	
<b>2:00 pm-4:00 pm</b>	<b>USE OF ICP-AES IN SOIL, PLANT AND WATER ANALYSES</b>	<b>DR. DHANWINDER SINGH / DR. SUMITA CHANDEL</b>
<b>4:00 pm-5:00 pm</b>	<b>VALEDICTORY</b>	



## BIODATA

NAME Prof./Dr./Mr./Ms.																	

DESIGNATION																

ORGANIZATION																

DATE OF ENTRY IN SERVICE															

CATEGORY (GENERAL / SC / ST / OBC)									

DATE OF BIRTH										

SEX (M/ F)		

COMPLETE ADDRESS (OFFICE)															

COMPLETE ADDRESS (RESIDENCE)															

CONTACT DETAILS	PHONE (O)	PHONE (R)	MOBILE No.	E-MAIL

<b>EDUCATIONAL / PROFESSIONAL QUALIFICATIONS (GRADUATION ONWARDS)</b>					
Sr. No.	EXAMINATION/ DEGREE	UNIVERSITY/ INSTITUTE	YEAR	SUBJECT	DIVISION/PERCENTAGE OF MARKS

<b>EXPERIENCE</b>					
Sr. No.	NAME OF THE ORGANISATION	DESIGNATION	FROM	TO	DUTY PERFORMED

<b>TRAINING ATTENDED</b>				
Sr. No.	YEAR	NAME OF THE TRAINING PROGRAMME	NAME OF THE INSTITUTE	DURATION

<b>RESEARCH EXPERIENCE</b>				
Sr. No.	YEAR	TOPIC OF RESEARCH	SPONSORING AGENCY	GIST OF REASEARCH

<b>PAPER PUBLISHED / PATENT FILED/OBTAINED</b>				
Sr. No.	YEAR	TOPIC OF PAPER/ BOOK	GIST OF PAPER	NAME OF JOURNAL/ MAGZINE/ PUBLISHER

**Briefly give details of significant contribution made by you in the field of Science & Technology during your career. (100 words)**

**Date:**

**(Signature)**