



# ANNOUNCEMENT-CUM- INFORMATION BROCHURE

21-days ICAR Sponsored Winter School

On

Advances in Cutting-Edge Allele Mining and Bioinformatics Tools and techniques  
for Skill Development in Efficient and Tailored Crop Improvement  
(24<sup>th</sup> January to 13<sup>th</sup> February, 2026)



**Organized by**

**School of Crop Improvement, College of Post Graduate Studies in Agricultural Sciences**  
Umiyam (Barapani)-793 103, Shillong, Meghalaya, CAU, (Imphal) [www.cpgs.ac.in](http://www.cpgs.ac.in)

**Sponsored by**

**Indian Council of Agricultural Research (ICAR)**  
New Delhi-110 012, India [www.icar.gov.in](http://www.icar.gov.in)

## About College of Post Graduate Studies in Agricultural Sciences (CPGS-AS), Umiam

College of Post Graduate Studies in Agricultural Sciences (formerly known as CPGS), a constituent College of the Central Agricultural University, Imphal (CAU-Imphal) was established in the year 2007 with the sole objective of training post graduate students of agriculture from all over the country including North Eastern Hill states. It is expected that these students would eventually become the torch bearers for enhancing the agricultural growth and livelihood support for the farming and rural community in the region.



## About Central Agricultural University, Imphal

The Central Agricultural University, Imphal has been established by an act of Parliament, the Central Agricultural University Act, 1992 (No.40 of 1992). The Act came into effect on 26th January, 1993 with the issue of notification by the Department of Agricultural Research and Education (DARE), Govt. of India. The University became functional with the joining of first Vice-Chancellor on 13th September, 1993. The jurisdiction of the University extends to seven North-Eastern Hill States viz., Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Nagaland and Tripura, with headquarter at Imphal in Manipur. The CAU-Imphal, with its 13 constituent colleges spread across the northeastern states, plays a pivotal role in promoting agricultural education, research, and extension. CAU's mission is to become a center of excellence in agriculture and allied sciences through teaching, research, and extension programs. The constituent colleges, cater to various disciplines including agriculture, horticulture, fisheries, veterinary sciences, food technology, and agricultural engineering. CAU is also home to six Krishi Vigyan Kendras (KVKs), which focus on extension education to empower farmers. The university's objectives include: To impart education in different branches of agriculture and allied science as it may deem fit; To further the advancement of learning and conducting of research in agriculture and allied sciences; To undertake extension education programme in the states under its jurisdiction; To undertake such other activities, as it may deem fit, from time to time. With its comprehensive network, CAU is committed to achieving sustainable agricultural growth and development in the region.



## Background of the Winter School

The rapid evolution of genomics, next-generation sequencing (NGS) platforms, and computational biology has opened new avenues for the precise identification, characterization, and deployment of superior alleles governing complex traits in crops. These advanced methodologies, coupled with powerful bioinformatics resources, now allow researchers to uncover hidden natural variation, dissect molecular mechanisms underlying adaptive traits, and fast-track breeding pipelines through informed decision-making. Despite the availability of diverse germplasm resources and multiple crop improvement programs across India, the practical utilization of molecular and genomic insights for targeted breeding remains limited. This gap is more evident in ecologically unique regions such as the North-Eastern Himalayan belt, where invaluable genetic resources exist but remain under-studied due to limited exposure to cutting-edge analytical platforms and hands-on skill development opportunities. This 21-day Winter School has been conceptualized to develop a technically competent and research-oriented workforce capable of applying allele mining, molecular marker systems, NGS-based analytics, and bioinformatics tools for precise, efficient, and demand-driven crop improvement across diverse environments and production systems.

## Objectives

1. To provide clear knowledge on allele mining and modern bioinformatics tools used in crop improvement.
2. To give hands-on training in laboratory and computer-based methods for identifying useful genes and analyzing genomic data.
3. To build skills that help participants apply advanced molecular and data-driven techniques for faster and more efficient crop breeding.

## Broad Themes of the Course Content:

1. Plant Genetic Resources For Crop Improvement
2. Modern Allele Mining Tools And Techniques For Biotic, Abiotic Stress Tolerance And Other Useful Traits
3. Modern Bioinformatic Tools And Techniques For Crop Improvement
4. IPRs In Crop Improvement
5. Basic Statistics And Application Software Such As R-Software For Crop Improvement

## Eligibility qualification

Master's Degree in Agriculture and allied disciplines/ Life Sciences/ Botany/ Genetics/Plant breeding/ Seed Science and Technology/PGR/Horticulture/ Biotechnology with working knowledge of computers and crop improvement. The applicant should not be below the rank of Assistant Professor and equivalent in the concerned subject under SAUs/ CAUs/ CUs/ Deemed University/ KVKs/ ICAR Institute.

## How to Apply ?

The interested and eligible participants applications will be received online at **Course Director** [norensingh27@gmail.com](mailto:norensingh27@gmail.com). After filing the application, take a print out of the application and get it approved by the competent authority of your institute and send the scanned copy of the application along with online payment transaction receipt at Course Director [norensingh27@gmail.com](mailto:norensingh27@gmail.com) on or before 31.12.2025. The selected 25 candidates must bring the hard copy of the duly forwarded application along with a DD of Rs. 50/- (Non-refundable registration fee) drawn in favour of **Dean, CPGS-AS, Umiam** with them and submit it to the **Course Director** during the winter school. A maximum of 25 participants will be selected for the course by the screening committee as per the ICAR guidelines. The selection of the participants will be conveyed to the applicants through e-mail. In case of any query, please contact Course Director or Course Coordinators. The selected candidates will have to confirm their participation latest by 03<sup>th</sup> January, 2026.

## Important dates

1. Last date for receipt of duly forwarded application: 31.12.2025.
2. Intimation of selection: 03.01.2026.
3. Confirmation of participation by candidates: 10.01.2026

## Duration of training

The training shall be organized for 21 days from 24-01-2026 to 13-02-2026 (both days inclusive). The participants are expected to arrive latest by evening of 23-01-2026 and can leave after 5.00 pm on 13.02.2026.

## Travel, boarding and lodging

Participants will be paid travel (to and fro) fare by rail (restricted to AC-III tier subject to the availability of funds) or by bus as per their entitlement. Actual TA for the shortest route will be paid on production of the tickets. Participants are requested not to bring their spouse or any family member as there is no extra scope for their accommodation. Free shared accommodation in the CPGS-AS Guest House and free lodging (food) will be provided to the selected candidates during the training programme. The local candidates are not eligible for boarding and lodging, however, they will be provided local hospitality like working lunch, tea, snacks, etc.

## Weather conditions during January-February

Weather in Umiam during February remains very pleasant. The average temperature lies in the range of 10°C to 20°C.

## About the city

Born in the laps of nature, Shillong offers every one of its bequeathed element for exploration to the wanderlust. It is the home to numerous waterfalls, the exciting mountain peaks, crystal clear lakes, breathtakingly beautiful golf courses, museums and the zoo are the key reasons why people visit Shillong. Apart from the natural beauty, Shillong also acts as the gateway to Meghalaya, the state famous for heavy rainfalls, caving, tallest waterfalls, beautiful landscapes and amazing people and culture.



## How to reach CPGS-AS?

The College of Post Graduate Studies in Agricultural Sciences is ideally located at Umiam (Barapani) in Ri-Bhoi district of Meghalaya, about 20 km before Shillong City, the capital of Meghalaya, on Guwahati-Shillong Road. The nearest railway station is Guwahati. It is well connected by road from Guwahati, which is around 80 km. The regular bus and taxi facilities are available from Guwahati. The nearest airport is Shillong about 6 km from the institute with only few flights.

### Map showing location of the CPGS-AS, Umiam (Barapani)



#### Patron

**Dr. Anupam Mishra**, Honourable Vice Chancellor, CAU-Imphal (Manipur)

#### Co-Patrons

**Prof. Indira Sarangthem** (Director of Instruction); **Dr. Lalita Mohan Garnayak** (Director of Research);  
**Prof. Ph. Ranjit Sharma** (Director of Extension Education); **Prof. T. R. Sharma** (Registrar) of CAU-Imphal (Manipur)

#### Chairman Organizing Committee

**Prof. Dwipendra Thakuria**

Dean, College of Post Graduate Studies in Agricultural Sciences, Umiam (Barapani)-793 103

#### Address for Correspondence

#### Course Director

**Prof. K. Noren Singh**, Course Director & Professor SCI, CPGS-AS, CAU (Imphal), Umiam (Barapani), Meghalaya  
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#### Course Co-Directors

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#### Course Co-ordinators

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**College of Post Graduate Studies in Agricultural Sciences,  
CAU (Imphal), Umiam (Barapani), Meghalaya**



**Application format for participation in 21-days ICAR Sponsored Winter School  
on “Advances in Cutting-Edge Allele Mining and Bioinformatics Tools and techniques  
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(From 24<sup>th</sup> January to 13<sup>th</sup> February, 2026)

|    |  |                |             |                                       |
|----|--|----------------|-------------|---------------------------------------|
| 1  | Name (in block letters)  | :              |             |                                       |
| 2  | Designation  | :              |             |                                       |
| 3  | Present employer address   | :              |             |                                       |
| 4  | Address to which reply should be sent (in block letters)   | :              |             |                                       |
| 5  | Mobile Number  | :              |             |                                       |
| 6  | E-mail Id  | :              |             |                                       |
| 7  | Date of birth  | :              |             |                                       |
| 8  | Gender   | :              |             |                                       |
| 9  | <b>Educational qualifications (graduation onwards)</b>   |                |             |                                       |
|    | <b>Degree</b>  | <b>Subject</b> | <b>Year</b> | <b>Percentage of Marks / Division</b> |
|    | Bachelor   |                |             |                                       |
|    | Master   |                |             |                                       |
|    | Ph.D.  |                |             |                                       |
|    | Others   |                |             |                                       |
| 10 | <b>Area of research</b>  |                |             |                                       |
| 11 | <b>Mention if you have participated in any research seminar, Summer/Winter/Short Course etc. during last five (5) years under I.C.A.R./ Other organizations.</b> |                |             |                                       |

Signature of the Applicant with Date

**12. Recommendations of forwarding Institute**

It is certified that information furnished by the candidate is found correct.

Signature & Seal of the Forwarding Authority