

Educational Trip to NIGAB: Bridging Academia and Research

The **Department of Bioinformatics at the International Islamic University Islamabad (IIUI)** organized an **educational trip to the National Institute of Genomics and Advanced Biotechnology (NIGAB)** and the **Plant Genetic Resources Institute (PGRI) at the National Agricultural Research Center (NARC)**. This trip was planned to provide students with **practical exposure to advancements in genomics and biotechnology**, allowing them to observe state-of-the-art research facilities and interact with experts in the field. By visiting these renowned research institutions, students had the opportunity to gain insights into modern bioinformatics applications, agricultural biotechnology, and the latest developments in genetic research.



The primary objective of this trip was to offer students an **educational experience beyond the classroom** by exposing them to cutting-edge research in genomics and biotechnology. It aimed to bridge the gap between **theoretical knowledge and real-world applications**, enabling students to witness the methodologies and technologies driving modern research. Additionally, the visit provided valuable **career insights**, allowing students to interact with industry professionals, researchers, and scientists who are actively working in the field. These interactions helped students understand potential career paths and the skills required to excel in bioinformatics, genomics, and biotechnology.

The trip was planned for **students from the Department of Bioinformatics at IIUI**, offering them a guided tour of NIGAB's **advanced research laboratories** and ongoing projects in genomics. Students observed practical applications of genomic technologies, including DNA sequencing, gene editing, and bioinformatics-driven analysis of genetic data. The visit also included a session at PGRI, where students were introduced to the **conservation of plant genetic resources and their biotechnological applications in agriculture**. The trip was scheduled for **December 10, 2024**, providing a structured itinerary that ensured students gained maximum learning from the visit.

The expected outcomes of this trip were **enhanced practical knowledge**, as students were able to see firsthand how genomics and biotechnology are applied in agricultural and biomedical research. It also aimed to **improve career readiness** by exposing students to industry standards and professional research environments, helping them understand the future opportunities available in bioinformatics and related fields. Moreover, this initiative was intended to **strengthen academia-industry ties**, encouraging collaboration between universities and research institutions to foster innovation and scientific advancements.

The **educational trip to NIGAB and PGRI** was a highly valuable learning experience for the students, providing them with **practical exposure, industry insights, and inspiration for future careers in genomics and biotechnology**. By engaging with experts, observing research in action, and understanding real-world applications of their academic studies, students gained a deeper appreciation for the field. This visit not only enriched their knowledge but also **motivated them to pursue advanced research and career opportunities in bioinformatics, making it a significant step in their academic and professional journey**.