# **First Quantum Computing Hackathon in Pakistan**

📅 **February 06 – 08, 2026** 📍 **National Center for Physics (NCP), Islamabad, Pakistan**

## **About the Hackathon**

The **First Quantum Computing Hackathon in Pakistan** will bring together brilliant minds from across the country to solve real-world challenges using quantum technologies. This three-day event will be hosted by the **Pakistan Institute of Engineering & Applied Sciences (PIEAS)** in collaboration with the **National Center for Physics (NCP)** and the **National Institute of Lasers and Optronics (NILOP)**, with support from the **Open Quantum Institute (OQI)**.

This hackathon will be Pakistan’s **first dedicated quantum problem-solving competition**, directly connecting innovation to the **UN Sustainable Development Goals (SDGs)** while building national capacity in quantum computing, communication, and security

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## **Competition Methodology**

The hackathon will follow a structured multi-stage process:

1. **Registration & Screening** – Students and young researchers will apply online. Based on background, motivation, competanacy and ………, **70 applicants** will be shortlisted.
2. **Preparatory Coursework** – Shortlisted candidates will attend **OQI-led online training** in quantum principles and programming. They will complete assignments to demonstrate performance.
3. **Final Selection & Teams** – **49 participants** will be chosen based on their performance in course work and dedication and grouped into **7 diverse teams** of 7 members each.
4. **Orientation & Mentorship** – Teams will be introduced to the hackathon format, SDG-driven challenges, and assigned expert mentors.
5. **Hackathon Competition** – During the 3-day event at NCP, teams will develop and present innovative quantum solutions.
6. **Awards & Recognition** – Winning teams will receive **cash prizes, medals, long time mentoring, participation in national and international summer colleges and invitations to present at the International Natural Sciences Conference (INSC)**

## **Evaluation Criteria**

Projects will be judged by a panel of international experts on the following criteria:

* **Innovation & Creativity** – Novelty of the idea and originality of the approach.
* **Quantum Depth** – Effective and meaningful use of quantum principles and programming.
* **Relevance to SDGs** – Alignment with local challenges and global goals.
* **Feasibility & Impact** – Practicality, scalability, and potential real-world benefits.
* **Teamwork & Presentation** – Collaboration, clarity, and quality of final pitch.

## **Themes & Challenges**

The hackathon will address selected **UN SDGs**, localized for Pakistan’s needs:

* **Health & Well-Being** – affordable diagnostics & rural healthcare
* **Quality Education** – inclusive EdTech in local languages
* **Gender Equality** – reducing gender gaps in STEM & workplaces
* **Clean Water & Sanitation** – low-tech purification & monitoring
* **Clean Energy** – rural solar microgrids & storage solutions
* **Economic Growth** – digital freelancing & micro-enterprise tools
* **Climate Action** – early warning systems & AI-based risk maps
* **Life on Land** – reforestation & biodiversity monitoring  
  OQI supported Hackathon\_Concept…

## **Who Can Apply?**

* Open to **students and young researchers** from universities across Pakistan.
* Diverse **disciplines** (Physics, CS, Engineering, Mathematics, AI and Machine Learning).

## **Prizes & Recognition**

🏆 **1st Place**: Cash prize + Gold Medal  
 🥈 **2nd Place**: Cash prize + Silver Medal  
 🥉 **3rd Place**: Cash prize+ Bronze Medal

✨ Winning teams will also present their projects at the **International Nathiagalli Summer College and other national and international conferences (INSC)**.

## **Organizing Committee**

* **Project Manager & OQI Liaison:** **Dr. Manzoor Ikram**, Director General, NILOP
* **Committee Members:**

## **Logistics & Support**

* **Hosts:** PIEAS, NILOP, NCP
* **Partners:**
* **Sponsors:**

## **Get Involved**

Stay tuned for the **registration portal and detailed challenges**.  
 For inquiries and partnerships:

📧 **Dr. Manzoor Ikram** – Director General, NILOP  
 E-Mail: