



## **Interdisciplinary Masters Studentship Programme** Directorate General of Science and Technology, Government of Khyber Pakhtunkhwa

### **Guidance Brief**

Version 1.2

#### **What is the Interdisciplinary Masters Studentship Programme?**

The Interdisciplinary Masters Studentship programme offers one-year contracts to 60 Masters applicants in top universities in Khyber Pakhtunkhwa, with a clear objective of undertaking R&D in selected strategic areas.

Scholars are required to identify at least 1 novel scientific development, discovery, invention (prototype) or innovation (solution or products), they will be aiming to achieve/develop during their term.

The studentship allows successful candidates to join research groups of their choice, ideally in consortia funded in the 8+3 strategic thrust areas as identified by the Directorate General, and covers their stipends, research costs and a PI honorarium. The candidates will be enrolled in and will obtain their degrees from the host institution of their primary supervisor, which can be any university of Khyber Pakhtunkhwa.

The component will help begin to establish a critical mass of infrastructure and researchers in the three priority areas in KP, to help develop a competitive economic advantage.

This component will offer Masters studentships in 2 cohorts (of 30 Masters scholars each) for 1 year each.

**Application Form:** [https://bit.ly/KP\\_masters](https://bit.ly/KP_masters)

**Deadline:** Nov 3, 2022

**Supervisor IRTC Registration Form:** [https://bit.ly/IRTC\\_supervisors](https://bit.ly/IRTC_supervisors)

#### **8+3 strategic areas**

The Directorate General has identified 8+3 strategic areas which are considered the strategic focus. These include 8 application fields based on 8 key natural resources that Khyber Pakhtunkhwa has been endowed with. Science and technology R&D interventions are encouraged that can help in value addition and improvement at different levels of the value chains of these natural resources in our economy. These 8 thematic areas include:

1. Gemstones
2. Bees and Honey
3. Fruits and Vegetables
4. Fisheries
5. Herbs and Medicinal Plants
6. Micro Hydro Plants

7. Archeology
8. Urban Environment

These strategic areas also include 3 emerging areas that can provide a competitive advantage to the economy of Khyber Pakhtunkhwa in the near future. These 'moonshot' areas build own pockets of excellence in KP, and helps us focus and prioritise the investment offer resources into three priority areas that can put KP on the regional map in the next 10 years. These areas include:

1. Advanced Materials
2. Biomedicine
3. Space Sciences

### **What is IRTC?**

The Interdisciplinary Research Training Centre brings together some of the best R&D leaders from around the province and enables them to host and supervise undergraduate, masters and postdoctoral researchers under various programmes of the Directorate General of Science and Technology. These high-flying candidates will pursue a joint inter-disciplinary Masters with more than one supervisor from different institutions. The one year applies to the final/research year of their degree. The IRTC is hosted at the Directorate General of Science and Technology.

Applications will be invited from Principal Investigators/Group Leaders, who must have obtained a PhD from an HEC-accredited university and be leading a research group or unit in academia or a research institution (minimum equivalence to an Assistant Professor) or in a startup or the industry (minimum as Head of distinct project, department or division), in Khyber Pakhtunkhwa to join the IRTC as Approved Supervisors, using a prescribed template.

### **Rationale of the Component:**

- The studentship will offer top students in KP a chance to join a world-class interdisciplinary doctoral training programme and undertake their studies in KP.
- The IRTC model will help in breaking down walls and barriers and promote collaborative projective between researchers of different disciplines as well as from different institutions in KP along with collaborators from abroad. This will begin to foster a genuine and deep-rooted scientific community.
- Help connect the students with peers and mentors including leaders in science, and build a professional support network for them.
- With consistency in the fellowship in the coming years, KP will be able to attract talent from outside into KP, which will be a massive impetus to our economy over time.
- Through its prestige, the studentship will make R&D in science and technology and attractive career path for young students.

### **Mechanism of Implementation:**

The component will run in 2 cycles of one year each, starting in Year 1 and Year 2.

Each cycle will have the following steps:

- Advertise a Call for Applications for the Fellowship in national dailies, official websites, letters to universities and on social media, with a 30 days deadline from date of advertisement. This will require their CV as per prescribed format and a 500-words Personal Research Statement.
- The Technical Evaluation Committee shortlists candidates and invites them for detailed interviews within 30 days of the close of applications. Applicants will be required to submit a **Personal Research Plan** and a **Community Engagement and Outreach Plan** and that will be undertaken to achieve the goal of the fellowship in the identified host institution.
- A total of 30 IRTC Masters scholars will be selected for the prestigious one-year studentship every year and the results will be announced within 2 weeks of conducting the last interviews.

### **Criteria for Candidates:**

- A high-flying student with a minimum of 16 years of education from any HEC-recognised institution, in any discipline of science, technology, engineering and mathematics, from a top institution in the country or abroad.
- Non-KP candidates may also apply, provided their PI and Host Institution is based in Khyber Pakhtunkhwa.
- A personal research statement that includes the candidate's reasons and plans of undertaking research in KP and in their specific area of specialisation.
- A Letter of Support from at least two IRTC-approved supervisors that:
  - Clearly lays out commitment to host the candidate if s/he is awarded the Studentship
  - Approves of the research proposal (including milestones and deliverables) that is to be undertaken with the support of the Studentship
- A well thought out Personal Research Plan that has clear milestones with a goal to develop at least one novel scientific development, discovery, invention (prototype) or innovation (solution or products) identified as a deliverable.
- A personal Community Engagement and Outreach Plan, that may include a commitment to do any one sets of activities during the studentship year, from the following:

- At least 2 public lectures at a community space (such as co-working spaces, incubator spaces, coffee shops and others, or virtually)
- At least 3 lectures in public-sector or private-sector schools
- Participation in at least 1 STEM Fair, Carnival or Mela that is organized in your city or district.
- At least 2 articles around your research in a local newspaper in any language
- A policy roundtable around your subject area for both public and private sector stakeholders
- A workshop for patients/study participants around management and awareness of a particular disease.

**Criteria for PIs:**

- The PI should have funds for the research component of the Masters studentship that is laid out in the research plan. Tuition fees and university costs will be the responsibility of the student.
- The PI must be willing to commit to supervise and mentor the candidate and offer him or her office space and amenities and laboratory space and amenities that are needed to accomplish the candidate’s research goals.
- Help fine-tune and provide realistic feedback and approve of the personal research plan of the candidate along with its milestones and deliverables.
- Support the candidate with her/his personal community engagement and outreach plan.
- Oversee and facilitate the scholar to submit quarterly progress reports and final report to the IRTC team at DGST.

**Costs Covered by Studentship**

Each Studentship will cost PKR 0.6 million. This includes 12 months of stipend for the IRTC student at the rate of PKR 25,000 per month. Along with a research support of PKR 240,000 under the supervision of the PI, and a PI honorarium of PKR 60,000 after the graduation of the student.

**Monitoring of the Component:**

The scholar will be submitting brief quarterly progress reports on a prescribed template. The project staff may have in person check-ins with each scholar in case of any concern to ensure a smooth journey towards the goals of their research plan. The Studentship will end with a Final Report submitted by the scholar with the endorsement of the PI and Host Institution on a prescribed template.

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