



# BARC Training School

## Cultivating Excellence in Nuclear Science & Technology

**T**he Atomic Energy Training School, now recognized as the BARC Training School, was established in 1957 at the Bhabha Atomic Research Centre (BARC) in Mumbai. Its primary objective is to provide specialized technical education to talented youth across India in the fields of nuclear science and technology, subsequently recruiting them into the Department of Atomic Energy (DAE). Since its inception, the BARC Training School has been effectively managed by the Human Resource Development Division (HRDD), fulfilling Dr. Homi Bhabha's vision of a secure energy future for the nation. Currently, the training programmes offered have attained iconic status and have expanded to meet the diverse needs of the DAE. From its first batch in 1957-58 to the 67th batch in 2023-24, nearly ten thousand trainees in science and engineering have graduated from this esteemed institution.

The recruitment process begins with advertisements published in national newspapers, ensuring coverage across all states and union territories. Each year, HRDD conducts outreach activities alongside an online examination for recruitment under the Orientation Course for Engineering Graduates and Science Postgraduates (OCES) and the DAE Graduate Fellowship Scheme (DGFS). Candidates are screened based on their GATE scores or their performance in an online computer-based test (CBT) administered by HRDD. This CBT is conducted over a weekend at approximately 123 centers located in 49 cities throughout India, with one examination session dedicated to each discipline. Those who qualify for interview based on their GATE scores or CBT results must be called to attend the selection interview held in

Hyderabad for geology applicants and in Mumbai for other disciplines. The rigorous technical interview is conducted by a panel of experts. Selected OCES Trainee Scientific Officers (TSOs) undergo a comprehensive one-year training programme at the BARC Training School in Nuclear Science & Technology, while DGFS Fellows pursue an M.Tech degree at selected Indian Institutes of Technology (IITs). Upon successful completion of their respective programmes, both OCES TSOs and DGFS Fellows are absorbed into the DAE.

Currently, all faculty members involved in training programmes are sourced from within the department, ensuring a wealth of qualified educators who meet academic standards. The courses and syllabi are regularly updated to align with current trends, particularly in nuclear science and engineering. The final merit list for TSOs is determined by performance in weekly exams, end-of-semester exams, project work, and viva-voce assessments, which ultimately influence



Graduation Function for 67<sup>th</sup> (OCES-2023) Batch Trainees.





Inauguration Function for 68<sup>th</sup> (OCES-2024) Batch Trainees.

their postings within various DAE units. Beyond academic pursuits, HRDD organizes evening lectures featuring eminent personalities discussing cutting-edge research topics in science and engineering. Additional activities include sports meet, yoga sessions, cultural programme, publication of the TSO magazine "Karvaan," study tours to other DAE units, administrative workshops, and soft-skill development workshop all aimed at fostering holistic development for the TSOs.

HRDD also supports the BARC Ph.D programme by accepting Junior Research Fellows (JRFs) for basic sciences and various engineering disciplines under the DAE Doctoral Fellowship Scheme (DDFS) for engineering postgraduates. The Ph.D programme at BARC combines classroom instruction with significant research components. The BARC Training School provides essential infrastructure and logistical support for Ph.D coursework across all disciplines.

In its ongoing efforts to engage with young minds regarding DAE's advanced activities and maintain connections with academia, HRDD offers internship and project opportunities to deserving students pursuing degrees in Science and Engineering from universities across India. Applications are processed by HRDD based on eligibility criteria, leading to allocations of guides and research labs according to candidates' disciplines and topic preferences. This initiative is mutually beneficial: it supplies short-term manpower to BARC while igniting a passion for STEM research among students, guiding them toward careers in research.

Additionally, HRDD organizes QUEST under its Continuing



Inauguration Function for 3<sup>rd</sup> Batch of BARC-Ph.D programme (JRFs) under HBNI.

Education Programme. QUEST is an innovative initiative that allows Homi Bhabha National Institute (HBNI) Ph.D students and employees from DAE units to enhance their knowledge through advanced courses approved by HBNI's Board of Studies (BoS). This programme serves as a platform for knowledge transfer where experienced DAE professionals share their expertise with aspiring scientists and technologists, including Ph.D candidates. Over recent years, HRDD has successfully executed numerous advanced courses through QUEST, further solidifying its commitment to education and professional development within India's nuclear research landscape.

-The article has been compiled by HRDD and SIRD Newsletter Editorial Team.

Valedictory function of Quest course on Nuclear Power Project Management.

