## Inter-Disciplinary Research by Establishing Centre Under RUSA 2.0

Guru Nanak Dev University has established a three Centres namely Centre for Agricultural Research and Innovation (CARI), Centre for Basic and Translational Research in Health Sciences (CBTRHS) and Centre for Sustainable Habitat (CSH) in 2019 under component 4 of Rashtriya Uchchattar Shiksha Abhiyan (RUSA 2.0). The major focus of the Centres is to build a world-class ecosystem for promoting cross/ inter-disciplinary research and translate it into innovative and meaningful practices in the field of agriculture, health, environment and built habit for the benefit of society. The Centres act as catalysts to support research and innovation by providing resources to investigators, staff, scholars, trainees, and other stakeholders.

CARI has the mandate to integrate research and outreach education in agriculture, food systems and the environment to establish an ecologically and economically sustainable model. Eight inter-disciplinary projects have been sanctioned to the faculty of different departments of the University to conduct research in the area of agriculture and food sector. Also, seven post-doctoral fellows have been hired to work on the focus area of the Centre. It also intends to engage with progressive farmers of the region to know about their problems and expectations to develop region-specific sustainable solutions.

CBTRHS aims to translate fundamental research and ideas into meaningful practices in the area of health sciences. Fifteen inter-disciplinary research projects have been sanctioned to the faculty of ten departments of the University. The centre is also in process of developing a centralized facility in Emerging Life Science Building to provide a centralized resource dedicated to facilitating biomedical research to promote multi-disciplinary basic and translational research, and foster long term collaboration between clinicians and basic science researchers.

CSH is established in the University to propagate the agenda of sustainability in line with the Sustainable Development Goals purposed by United Nations for quality living education, clean water and sanitation, affordable and green energy, sustainable cities and communities and climate action. Inter-disciplinary research is intended to address the key challenges of sustainable habitat, environment and ecology, social economic characteristics to help in formulating workable, achievable and rational planning and management policies and strategies at the local and regional levels that reduce our planetary footprint, emissions, resource consumption and waste, and improves quality of life for all. State-of-art centralized design, transport, water and air and noise pollution labs are established to facilitate eleven inter-disciplinary research projects awarded to the faculty of different departments of the University. Three post-doctoral fellows have been hired to conduct multi-faceted research.

All the Centres have signed MoUs with the organizations of national and international repute and have established very strong advisory board to bring new knowledge, technology and opportunities suiting to the mandate of the respective Centre.

## Augmentation of Digital Initiatives in COVID Times

The University has undertaken many digital initiatives in line with the Digital India Programme of the Government of India. Also, the existing digital initiatives have been strengthened for improved academics and administrative matters. The Internet Bandwidth Scheme of GNDU Campus is increased from 10 Mbps to 1Gbps through National Knowledge Network (NKN) to ensure fast and high quality internet connectivity for the students of GNDU. SMS system has been introduced to keep parents of the campus students updated about their attendance. Centre for IT Solutions is playing an important role in development and deployment of various software applications in various branches of the University. It has also initiated the integration of already working software applications on a single platform to manage the data in a centralized data repository so as to meet the vision of University authorities. File tracking system is launched to speed up the process of case approvals and applications. The University has taken an important initiative to establish in house "Hardware Cell" and "Internet Maintenance Cell" to handle day-to-day hardware and internet related issues. 24/7 internet connectivity is ensured to facilitate the teachers, research scholars and students of the University to perform their educational activities effectively and efficiently.

During the pandemic period the biggest challenge for any Institute was to conduct the online classes as well as to conduct online examinations. University has built up a platform using google suite for education to conduct online classes using google meet as well as google classroom. More than 10000 students' official IDs were created along with faculty members for the smooth functioning of classes. Faculty members have prepared their presentations and used live board for teaching. Internet bandwidth as well as Campus wide Network are the main concern to run this platform, in this regard the university bandwidth is upgraded to 1 GBPS (1:1) as well as new 10G campus wide network has been established. Many teachers have recorded their practical videos which are shared with students to fulfil their needs. Online examinations have been conducted for exit classes to declare their results in time. Ebooks as well e-journals are procuring by university to give its access to the students at their homes. Video conferencing facilities equipped media rooms have been prepared to handle online meeting with government officials. Many Online National level Webinars/conferences have been conducted during this period.