Research Centre with a specific focus on environmental sustainability

Climatology Center

The Climatology Center is dedicated to research and education in sustainable housing and energy-efficient architecture. The center supports climate-resilient practices using advanced tools like thermal imagers and solar power meters. Its mission aligns with global Sustainable Development Goals (SDGs) and focuses on reducing carbon footprints in construction. Research involves material performance studies, site-specific analysis, and energy-efficient designs. The center conducts workshops and training sessions, empowering students and professionals with hands-on expertise. Faculty and researchers actively publish in international journals, contributing to advancements in sustainable architectural practices. Collaborative projects enhance the implementation of energy-efficient technologies. Its state-of-the-art facilities enable accurate testing of thermal insulation, airflow, and solar energy optimization. The center's interdisciplinary approach integrates theory and practical applications, bridging academia and real-world challenges.

WEB LINK: https://www.kluniversity.in/rnd/RCClimatology-Center.aspx

Environmental Water Resource Transportation Geotechnical Engineering Research Center

This research center advances sustainable practices in civil engineering, focusing on water resource management, geotechnical analysis, and transportation optimization. The lab utilizes cutting-edge tools like triaxial testers and CBR machines to analyze soil behavior, traffic systems, and structural resilience. Research projects address urban planning challenges, climate impacts on infrastructure, and eco-friendly material development. Faculty expertise spans hydrology, traffic engineering, and geotechnical solutions, ensuring impactful research contributions. The lab fosters industry collaborations and community outreach programs to implement sustainable solutions. Training sessions and Ph.D. programs prepare students for complex challenges in infrastructure and environmental engineering. Its mission includes promoting green engineering practices and developing resilient urban solutions.

WEB LINK : https://www.kluniversity.in/rnd/RCEWRTGeotechnical%20Engineering-center.aspx

Atmospheric Observations & Model Simulation Research Center

Atmospheric Observations & Model Simulations (ATMOS) Lab is an independent research lab funded by the Department of Science and Technology by SERB (Science and Engineering Research Board), Government of India, started in the year 2021 with the well-equipped

instruments and other facilities and it is allocated in the room no.406B at 4th floor of FED (F)-Block which has an open area such that easy to make sky observations. Air pollution, from sources like car emissions and factory chemicals, poses significant health risks, especially for those with heart or lung conditions. The Air Quality Index (AQI) tracks daily pollution levels. Aerosols, tiny particles from natural and human activities, impact the Earths energy balance by altering solar energy reaching the surface.

WEB LINK: https://www.kluniversity.in/rnd/RC-Atmospheric-ObservationsnModel-Simulation-Research-Center.aspx

Soil and Seed Testing allies Eco Friendly Research Center

The lab of eco-friendly agriculture is a dynamic hub of innovation and research dedicated to promoting sustainable farming practices that harmonize with the natural environment. By focusing on reducing chemical inputs, conserving natural resources, and enhancing biodiversity, the lab develops cutting- edge solutions that address the pressing challenges of modern agriculture. Researchers in this lab study soil health, water conservation, and pest management techniques to create sustainable systems that minimize environmental impact. They explore organic farming methods, precision agriculture, and the use of renewable energy in farming operations, aiming to reduce greenhouse gas emissions and combat climate change. The lab also emphasizes the integration of traditional knowledge with modern technologies, fostering a holistic approach to food production. Collaborating with farmers, policymakers, and communities, the lab ensures that its innovations are both practical and scalable, empowering agricultural systems to meet the growing global demand for food without compromising the planets health. Through education and outreach programs.

WEB LINK : https://www.kluniversity.in/rnd/RC-Eco-Friendly-Agriculture-Research-Center.aspx

Climate Resilience Agriculture Research Center

The Climate Resilient Agriculture Lab focuses on developing innovative strategies to combat the adverse effects of climate change on agriculture. Research areas include drought and salt tolerance, stress-resilient crop development, and advanced genomic techniques such as CRISPR/Cas9. The lab is equipped with state-of-the-art facilities for genome editing, plant physiology studies, and soil analysis. Collaborative efforts with academic institutions, policymakers, and farmers aim to enhance agricultural sustainability and productivity. The lab emphasizes translational research, linking scientific discoveries to practical applications in farming. Projects include developing resilient crop varieties, optimizing water use, and creating climate-smart agricultural systems. Faculty actively contribute to high-impact journals and international conferences, showcasing advancements in agricultural resilience. Its mission is to safeguard global food security by addressing climate challenges through cutting-edge research.

WEB LINK : https://www.kluniversity.in/rnd/RC-Climate-Resilient-Agriculture-Research-Center.aspx

Flexible Electronics Research Center

The Flexible Electronics Research Center focuses on interdisciplinary research in advanced materials, wearable devices, and sustainable electronics. Key research areas include energy harvesting systems, IoT devices, and e-skin technology. The centres facilities support material synthesis, device fabrication, and performance testing. Projects emphasize sustainable processes for flexible sensors and triboelectric nanogenerators. Collaborations with industry and academia enable technology transfer and commercialization. Workshops and internships train students and researchers in emerging flexible electronics techniques. The centres mission is to create eco-friendly and scalable solutions for next-generation electronic systems. Faculty and researchers actively publish in top journals, highlighting their expertise in this domain.

WEB LINK : https://www.kluniversity.in/rnd/RC-Flexible-Electronics-Research-Center.aspx