



7 AFFORDABLE AND
CLEAN ENERGY



SDG - 7

AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable and modern energy for all.

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Renewable Energy Solutions, Energy Efficiency, Promote access to research, technology and investments in Clean Energy

SDG 7 is committed to advancing and promoting the adoption of sustainable energy systems. At Galgotias University, we are at the forefront of championing renewable energy and sustainability, setting the wheels in motion for a greener future. Our research and educational initiatives push the envelope in clean energy, aligning with government policies to meet national sustainability goals. Galgotias University's wireless solar bus promotes SDG 7 by offering affordable, emission-free transportation, reducing its carbon footprint, and showcasing renewable energy solutions, contributing to a greener, sustainable future for all. The campus serves as a living example, with a 200 kW solar plant powering the campus, ensuring round-the-clock energy savings and sustainability, a biogas plant, and energy-efficient systems leading the charge. We're committed to leaving no stone unturned in our mission to reduce energy waste and raise awareness. Through community outreach and practical applications, we are sowing the seeds for a sustainable tomorrow, fostering a clean, green campus. The university embraces sustainable energy by embedding it in education, driving renewable research, implementing energy-efficient measures and global alliances to fuel innovation and champion the renewable energy revolution. This comprehensive approach strengthens our commitment to SDG 7, positioning Galgotias University as a key driver of sustainable, equitable energy solutions.

“ Sustainability and Environmental Programs “

Doctor of Philosophy (Ph.D.) in Environmental Sciences
M.Sc. in Sustainability

“ Community Initiatives “

Initiative for Efficient Use of Natural Light Campus up-gradations under G-SCALE

Galgotias University has undertaken a remarkable initiative to promote sustainable and energy efficient infrastructure by maximizing the use of natural light across its campus. The classrooms at Galgotias University are equipped with wide, double-paned glass windows that allow ample ambient natural light to illuminate the interiors, creating a well-lit and conducive learning environment during the daytime and reduces dependence on artificial lighting, thereby lowering electricity consumption and minimizing the carbon footprint. Common areas such as study halls, cafeterias, and libraries, large windows and strategically placed skylights have been installed to enhance natural lighting, fostering a welcoming and eco-friendly ambiance.



Sustainable and shared Campus Transportation Program

Galgotias University has introduced a range of sustainable and convenient transportation services to support eco-friendly commuting and reduce campus congestion. The university encourages a carpool service to minimize the number of single-occupancy vehicles, fostering community engagement and lowering carbon emissions. Additionally, a car-sharing program allows students and staff to access shared vehicles for their travel needs, promoting efficient resource utilization. For group commuting, a van service and a reliable bus service have been established, ensuring seamless connectivity between the campus and nearby areas. Furthermore, the university has eliminated parking fees to incentivize shared and public transportation usage, reducing individual vehicle dependency while creating a more sustainable and accessible campus environment.



Eco-Friendly Sustainable Campus Awarded by Govt of India

Galgotias University proudly wins the "Eco-Friendly Sustainable Campus" award and a Certificate of Appreciation at SEPC's Education Excellence Awards 2024 by Ministry of Commerce and Industry, Govt. of India. A shining moment for sustainability and innovation.

Student Startups working with SDG-7

Aeroworks Drone Technologies - leading the way in aerial innovation, specializing in hydrogen-powered drones that revolutionize both efficiency and sustainability.

Ecruz India - committed to improving your home environment with our advanced BLDC (Brushless DC) fans and a wide range of high-quality home appliances.

Ed-Orian - Virtual teaching assistants, chatbots, and AI-powered learning tools can provide real-time support, answering questions and offering explanations for various topics.

" Research with SDG - 7"

- Enhancing the performance of solar-powered EV charging stations using the TOSSI-based CTF technique.
- Optimizing energy efficiency in MEC networks: a deep learning approach with Cybertwin-driven resource allocation.
- An advanced hybrid deep learning model for accurate energy load prediction in smart building.
- Photovoltaic applications of carbon-based nanomaterials.
- Recent advances in hydrogen production using metal organic frameworks and their composites.
- Applications of MXenes in hydrogen evolution/oxygen evolution and nitrogen reduction reaction.
- Energy Analysis of 135 MW Capacity of Reheating-Regenerative Steam Power Cycle using Irreversibility Approach.
- Calibration of a Drive System for a Human-Driven Multi-Rotor Propulsion Aircraft.



Environmental Impact Analysis Project Competition

The exhibition on the working models based on the theme "Integrated Approach in Science and Technology for a Sustainable Environmental Future" was organized by the Department of Chemistry, School of Basic Sciences. There were more than 100 projects showcased in the exhibition. The exhibition was organized into several thematic sections, each dedicated to a specific environmental issue. The first section focused on Climate Change and Global Warming, where students presented projects on the causes and effects of climate change, as well as potential solutions to mitigate its impact. Another significant section was dedicated to Biodiversity and Conservation. Here, students showcased projects highlighting the importance of preserving diverse ecosystems and protecting species. Waste Management and Recycling were another major theme of the exhibition. Students presented innovative ideas for reducing waste and promoting recycling practices. In the Water Conservation and Management section, students highlighted the significance of preserving water resources. Projects included rainwater harvesting systems, water purification methods, and ways to reduce water waste in daily life. The exhibition also featured a section on Sustainable Agriculture and Food Security, where students explored methods to achieve sustainable food production. Projects included vertical farming, hydroponics, and organic farming practices.



Plug into the future of clean energy and Study sustainable solutions at Galgotias university.

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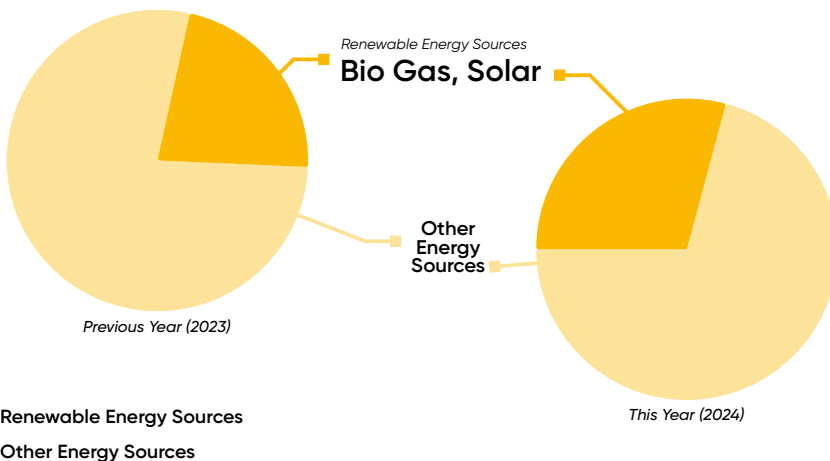
Student Training for Electric Vehicle Lab

The primary objective of the EV Lab training program is to provide students with practical experience and theoretical knowledge related to the design, development, and operation of electric vehicles. The training program covers various aspects of EV technology, including battery management systems, electric drive systems, power electronics, and charging infrastructure. By the end of the program, students are expected to have the technical know-how to design, troubleshoot, and maintain electric vehicles, preparing them for careers in this emerging industry.



Free Electric Vehicle Charging access at Campus

Galgotias University, dedicated to sustainable development and environmental care, has installed six Electric Vehicle (EV) charging stations on campus. This initiative encourages clean energy use and fosters the shift to green transportation systems. The project aligns with global sustainability goals, aiming to reduce greenhouse gas emissions by promoting EV adoption, offering convenient (free) charging access to students, faculty, and visitors, and supporting renewable energy use.



Energy Use Density

Galgotias University has increased its renewable energy share from 20% in 2023 to 28.6% in 2024, achieving a 43% growth.

By harnessing solar power and biogas, the university demonstrates its commitment to SDG 7: Affordable and Clean Energy, driving sustainability through innovative energy solutions.

Galgotias University upholds its commitment to SDG7 by **adopting energy-efficient practices**, conserving natural resources, and fostering a green, pollution-free campus for enhanced learning. The **green campus** serves as a hub for education, training, and promoting environmental stewardship.