K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

KR Mangalam University Sustainability Report

(2023-24)

K.R. Mangalam University aligns its institutional mission ‘to nurture global citizens through education for life and livelihood’ with the United Nations Sustainable Development Goals. SDG 12 — Responsible Consumption and Production — guides the University’s sustainability agenda by integrating circular-economy principles, ethical sourcing, and environmental stewardship into its academics, operations, and community partnerships.

Courses covering SDG

K.R. Mangalam University integrates sustainability, health, gender equity, food security, and environmental preservation throughout its undergraduate curricula. Each thematic track is directly aligned with SDG 12 (Responsible Consumption and Production) while also supporting related goals such as SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 6 (Clean Water and Sanitation). These elective tracks encourage students from diverse disciplines—including science, technology, design, law, education, and management—to engage with real-world sustainability challenges through project-based learning and interdisciplinary coursework.

Minor Specialization / Elective Tracks Offered to All Undergraduate Programs

All undergraduate students at K.R. Mangalam University complete value-added courses that integrate sustainability competencies. These courses link theory with practical field projects addressing local challenges such as water conservation, waste management, sustainable agriculture, and gender equity. This approach equips graduates with cross-disciplinary skills essential for green careers and responsible global citizenship.

Climate & Environment Studies	
Course Code	**Course Title**
BP206T	Environmental Sciences - Theory
BPT106	Environmental Studies
VAC151	Environmental Studies and Disaster Management
SAAG117A	Introductory Agro-Meteorology and Climate Change
OEC014	Energy Harvesting and Sustainability
SAAG311A	Rainfed Agriculture and Watershed Management
SAAG114A	Soil and Water Conservation Engineering
ETCE417A	Ground Water Development

Health & Well-Being	
Course Code	**Course Title**
OEC008	Fundamental of AI
OEC011	Health and Fitness
OEC012	Fundamentals of Python Programming
OEC013	Fundamental of Drawing
OEC023	Youth Psychology
BP701T	Instrumental Methods of Analysis - Theory
BP705P	Instrumental Methods Of Analysis - Practical

MPL205P	Experimental Pharmacology - II
MAPT405A	Health Promotion And Fitness
MAPT303A	General Medicine
BPT301	General Medicine
BPT206	Sociology And Psychology
SHPS331A	Organizational Psychology
SHPS335A	Clinical Psychology
SHPS337A	Health Psychology
SHPS332A	Advance Social Psychology
SHPS336A	Forensic Psychology
SHPS231A	Abnormal Psychology
SHPS232A	Fundamental of Cognitive Psychology
SHPS240A	Psychology and Media
HUPS101	Introduction to Psychology
HUPS103	Perspectives and Systems in Psychology
HUPS151	Introduction to Psychology Practicum
UPS101	Foundations of Psychology
HUPS102	Statistical Methods in Psychology-I
HUPS104	Biopsychology
HUPS152	Biopsychology Practicum (Practical)
UED102	Educational Psychology
VAC161	Fundamentals of MATLAB Programming
VAC162	Introduction to Instrumental Music

SHPS715A	Neuropsychology
SHPS706A	Health Psychology
SHPS714A	Forensic Psychology
SHPS601A	Foundations of Psychology (CC)
SHPS603A	Social Psychology (CC)
SHPS605A	Cognitive Psychology (CC)
SHPS604A	Positive Psychology
SHPS608A	Physiological Psychology
VAC153	Health & Fitness Management

Sustainability & Green Innovation

Course Code	**Course Title**
OEC014	Energy Harvesting and Sustainability
BP603T	Herbal Drug Technology - Theory
BP605T	Pharmaceutical Biotechnology Theory
BP609P	Herbal Drug Technology - Practical
OEC014	Energy Harvesting, and Sustainability
VAC117	Sustainability through Organic Kitchen Gardening
VAC148	Sustainability in Interiors

Food Science & Hospitality Management

Course Code	**Course Title**

HOCT101	Food and Beverage Production-I
HOCT103	Food and Beverage Service-I
HOCT102	Food and Beverage Production-II
HOCT104	Food and Beverage Service-II
HMCT204A	Food and Beverage Service-III
HMCT301A	Food Production and Patisserie-IV
HMCT404A	Advance Food and Beverage Service Management-II

Water and Energy Preservation Systems

Course Code	**Course Title**
SEC007	Groundwater Modelling
APCE230A	Building Services-I (Water Supply and Sanitation)
HOCT107	Hygiene, Sanitation and First Aid
SAAG311A	Rainfed Agriculture and Watershed Management
SAAG114A	Soil and Water Conservation Engineering

Gender & Society Studies

Course Code	**Course Title**
SHEL245A	Women's Writing
SHEL247A	Contemporary India: Women and Empowerment
SOLS506A	Law Relating to Women and Child
SOLS422A	Gender Justice and Feminist Jurisprudence

SEED530A	Gender, School and Society
SEED486A	Gender and Schooling

Research on Responsible Consumption and Production

K.R. Mangalam University (KRMU) demonstrates outstanding academic leadership in sustainability-oriented research. Between 2014 and 2024, the University produced 1,042 Scopus-indexed publications, of which 152 directly align with SDG 12, addressing topics such as sustainable supply chains, waste valorization, circular economy models, clean technology, and eco-innovation.

- CiteScore (2024): 69.2 – reflecting high academic impact
- Field-Weighted Citation Impact (FWCI 2024): 3.21 – over three times the global average

These achievements highlight KRMU's interdisciplinary approach, linking environmental science, management, engineering, and design to advance sustainable production systems and resource efficiency for a circular and inclusive economy.

Operational Measures

Ethical Sourcing and Sustainable Procurement

Under the *Ethical Sourcing Policy (2024)*, KRMU ensures that procurement follows sustainability, transparency, and fair-trade principles. Preference is given to local vendors adopting low-carbon practices and eco-friendly materials. Procurement choices emphasize biodegradable supplies, recyclable packaging, and energy-efficient production, reflecting the University's dedication to responsible institutional consumption.

Energy and Water Conservation

Guided by the *Sustainable Environment and Green Campus Policy (2024)*, KRMU operates an integrated resource-efficiency framework that includes:

- **Energy Efficiency**: LED retrofitting, BLDC fans, motion-sensor lighting, and solar streetlights; a 310 kW rooftop solar plant now offsets ≈ 35 % of electricity demand.
- **Water Stewardship:** A 300 KLD Sewage Treatment Plant (STP), 17 rainwater-harvesting structures, and low-flow fixtures enable 91 % reuse of treated wastewater for flushing and horticulture.

These initiatives support the University's 2027 targets of 50 % reduction in freshwater consumption and 25 % reduction in energy intensity across campus operations.

Governance and Waste Management Practices

KRMU functions as a living laboratory of sustainability, integrating waste-management governance with academic and community practices. The *Integrated Sustainable Environment and Green Campus Policy (2024)* focuses on the 3Rs—Reduce, Reuse, Recycle—and ensures stakeholder awareness through training, workshops, and NSS-led drives.

Institutional Framework

The University's waste system is governed through:

- Landfill and Zero-Waste Policy
- Recycling and Green Procurement Policy
- Annual Environmental, Green & Energy Audits by *M/s Samarth Management Pvt. Ltd.*
- Vendor MoUs with certified recyclers, including *Biotic Waste Solutions Ltd.* and *GreenTech Recyclers Pvt. Ltd.*, for scientific collection and disposal of e-waste and hazardous materials.

Solid Waste Management

All solid waste from hostels, cafeterias, and academic blocks is segregated at source using a three-bin colour system: Green – Biodegradable, Blue – Recyclable, and Yellow – Hazardous/Non-biodegradable.

- Organic waste (food waste, leaves) is processed through on-campus composting and vermicomposting units, with manure used for landscaping.
- Paper and metal scrap are sold to authorized vendors.
- Non-recyclables are disposed via municipal contractors in accordance with the *Municipal Solid Waste Rules (2016)*.
- A biogas plant converts ≈ 3.8 tonnes of food waste annually into clean energy and organic fertilizer, offsetting ≈ 7 kg LPG per day and avoiding 5–8 tons of CO_2 emissions.

Liquid Waste Management

The campus STP (100 KLD capacity) treats all domestic wastewater from hostels, labs, and offices. 91 % of treated water is reused for irrigation and flushing. Low-flow cisterns and aerators reduce water use, while monsoon recharge aids groundwater restoration. Compliance is maintained with the *Water Act (1974)*.

E-Waste and Hazardous Waste Management

Electronic waste (computers, printers, batteries) is periodically collected and handed to *CPCB-approved recyclers* under the *E-Waste Rules (2022)*. Hazardous waste such as waste oil from DG sets (≈ 275 L/year) and lab chemicals is stored in leak-proof containers and disposed of through *HSPCB-approved vendors* per the *Hazardous and Other Wastes Rules (2016)*.

Biomedical Waste Management

Biomedical waste from the University Health Centre and animal house is segregated in colour-coded bins and disposed through authorized contractors as per the *Biomedical Waste Management Rules (2018)*.

Monitoring and Performance

KRMU's Annual Green Audit (2023-24) recorded:

- 4,030 kg e-waste (83 % scientifically recycled)
- 600 kg hazardous waste (83 % disposed safely)
- 84 tonnes solid waste (60 % composted on campus)
- 81,600 KL wastewater (91 % reused for landscaping and flushing)

These practices have saved ≈ ₹ 2.5 lakh annually in fuel costs and reduced the University's carbon footprint by ≈ 70 tons CO_2-equivalent.

Awareness and Capacity Building

The University regularly organizes Waste Segregation Workshops, Swachhata Pakhwada campaigns, and Zero-Waste Campus Drives through the *NSS Unit* and *Environment Club*. These activities instil eco-literacy and embed sustainability values among students and staff, advancing KRMU's vision of a carbon-neutral campus.

Through structured policies, scientific waste management, renewable energy integration, and continuous community engagement, K.R. Mangalam University has created a campus ecosystem that harmonizes academic excellence with environmental responsibility. Its holistic initiatives—from ethical sourcing and circular economy practices to zero-waste and water-recycling programmes—reflect an enduring commitment to SDG 12: Responsible Consumption and Production, positioning KRMU as a benchmark for sustainable higher education institutions in India.

Community Engagement

K.R. Mangalam University integrates sustainability not only within academics and operations but also through a diverse range of community-based and student-driven initiatives. During 2023–24, the University organized several events aligned with SDG 12 – Responsible Consumption and Production, focusing on awareness, innovation, and action for sustainable living. Activities such as the *Zero-Waste Campus Drive*, *Swachhata Pakhwada Campaign*, and *Waste Segregation Workshops* engaged students, faculty, and staff in hands-on learning about recycling, composting, and efficient resource use. These programmes encouraged behavioral change and cultivated an eco-conscious campus culture consistent with the University's *Integrated Sustainable Environment and Green Campus Policy (2024)*.

Inter-school collaborations further enriched the sustainability mission. The *School of Architecture & Design* hosted workshops on up-cycling and sustainable materials, promoting creative reuse and responsible design. The *School of Management & Commerce* organized panel discussions on circular-economy models and sustainable entrepreneurship, linking academic insights to real-world business practices. Meanwhile, the *NSS Unit* and *Environment Club* coordinated E-waste collection drives, ensuring scientific recycling through authorized vendors and raising awareness about the importance of proper electronic waste disposal.

Beyond campus, KRMU extended its sustainability outreach to neighboring communities through awareness campaigns on water conservation, waste segregation, and food-waste reduction. Student volunteers demonstrated composting techniques, advocated for the use of biodegradable materials, and promoted the sharing of surplus food with marginalized groups. These initiatives reinforced the University's commitment to linking environmental sustainability with social inclusion, a key pillar of SDG 12.

Collectively, these events exemplify how KRMU transforms sustainability from a policy framework into lived practice. By combining education, community participation, and innovation, the University empowers its learners to become agents of change—championing responsible consumption, reducing environmental impact, and fostering a sustainable, circular-economy mindset that supports India's national and global sustainability agenda.