Mapping of **Information Technology** Curriculum and Activities to **Sustainable Development Goals** (SDGs)

At GMR Institute of Technology (GMRIT), the Department of **Information Technology** (IT) not only delivers a robust academic curriculum but also integrates a wide range of co-curricular and extra-curricular activities. These initiatives contribute to the holistic development of students and align with the United Nations **Sustainable Development Goals** (SDGs).

Integrated Co-curricular and Extra-curricular Activities

- Full Semester Internship at Industries (4 months)
- Summer Internship (4 weeks)
- Employability skills training (Soft skills, Aptitude skills, Domain skills)
- Hackathons, Codeathon, Group Discussions, Technical Quizzes, Seminars by Alumni and Industry Experts
- Student Professional Chapters: ACM, CSI, IEEE, ISTE
- Student Clubs: Coding Club, Robotic Club, Google Developer Student Club, Project Club, Literary Club, Math Club, Dance Club, Music Club, Film Club, Photography Club etc.
- NSS & NCC activities and Yoga and Meditation classes
- Participation in Smart India Hackathons (SIH)
- Participation and Organization of International Conferences

Mapping of IT Curriculum and Activities to SDGs

SDG	Relevant Courses	Core Topics Contributing to the SDG	Supporting Activities at GMRIT
SDG 2: Zero Hunger	AI & ML, Neural Networks, IoT Electives, Data Science	• Precision agriculture systems • Crop-yield prediction models • Smart irrigation using sensor data • Agri decision support	• Hackathons on AgriTech • Summer/Full internships in Agri startups or NGOs • Seminars by Alumni working in Agri-analytics • Participation in Smart India Hackathon (SIH) – Agri themes
SDG 6: Clean Water & Sanitation	Environmental Studies, IoT Electives, Sensor Technologies	• Water quality monitoring • IoT-based sanitation systems • Environmental impact analytics	• Capstone/mini projects in sanitation/clean water • SIH participation – Water/Sanitation Themes • Awareness drives via NSS/NCC

SDG 7: Affordable & Clean Energy	ML/DL, Cloud Computing, Data Analytics, Renewable Energy Electives	• Smart grids, energy analytics • Clean energy dashboards • Predictive models for energy efficiency	• Internships with clean energy firms • Technical clubs hosting energy challenges • IEEE Chapter seminars on energy tech
SDG 9: Industry, Innovation & Infrastructure	AI/ML, Software Engineering, Cloud & Full-Stack Dev, DevOps	• Scalable digital platforms • Industry 4.0 automation • Innovative product development	• Full Semester Internship (4 months) • Hackathons & Codeathons • Technical quizzes & GDs – ACM/CSI/IEEE/ISTE • Projects in International Conferences
SDG 11: Sustainable Cities & Communities	Data Visualization, IoT, Capstone Projects	• Smart cities and urban mobility • IoT for waste, energy, building management • Urban data visualization	• Coding club projects on smart solutions • SIH entries on smart city themes • NCC/NSS community outreach
SDG 12: Responsible Consumption & Production	Software Engineering, Cloud Computing, AI Ethics, Human Values	• Energy-efficient software • Green computing practices • Ethical design and deployment	• Green software workshops – IEEE/ISTE • Audit Courses – Ethics, IPR, Circular Economy • Alumni talks on sustainable practices
SDG 13: Climate Action	Environmental Studies, AI/ML, Climate electives	• Climate change forecasting • Data-driven carbon tracking • Disaster response systems	• NSS plantation & awareness • Climate-focused projects • Audit course on Climate Change
SDG 16: Peace, Justice & Strong Institutions	Cyber Security, Ethics & Human Values	• Secure systems • Data privacy & compliance • Ethical AI systems	• Hackathons on Cyber Safety • NCC discipline efforts • Ethics & IPR workshops • NSS outreach

SDG 4: Quality Education	Core Programming, DBMS, AI/ML, Web Dev, etc.	• Modern curriculum • Life-long learning platforms • Interactive learning design	• Employability Skills (soft, domain) • Alumni mentoring & talks • Clubs & internships • ECA/CCA for holistic growth
SDG 17: Partnerships for the Goals	Project Work, DevOps, Full Stack, Cloud, Capstones	• Interdisciplinary collaborations • Open data & integration • Innovation ecosystems	• Industry-academia internships • SIH with Ministries • International Conferences • ACM/CSI/IEEE/ISTE partnerships