

Mapping of CSE Curriculum and Activities to Sustainable Development Goals (SDGs)

At GMR Institute of Technology (GMRIT), the Department of **Computer Science and Engineering (CSE) and allied branches** not only deliver 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, Dance Club, Music Club, Film Club, etc.
- NSS & NCC activities and Yoga and Meditation classes
- Participation in Smart India Hackathons (SIH)
- Participation and Organization of International Conferences

Mapping of CSE 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, Data Science	<ul style="list-style-type: none"> • Precision agriculture systems • Crop-yield prediction models • Smart irrigation using sensor data • Agri decision support 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Water quality monitoring • IoT-based sanitation systems • Environmental impact analytics 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Smart grids, energy analytics • Clean energy dashboards • Predictive models for energy efficiency 	<ul style="list-style-type: none"> • Internships with clean energy firms • Technical clubs hosting energy challenges • IEEE Chapter seminars on energy tech

Contd.....02

GMR Institute of Technology

An Autonomous Institute Affiliated to JNTU-GV Vizianagaram

All UG Courses are accredited by **NBA**

Institute Accredited by **NAAC** with "A" grade (3rd cycle)

Ranked 188th in NIRF-2022



GMR Nagar, RAJAM-532 127

Vizianagaram (Dist.)

Andhra Pradesh

T +91 (8941) 251 592/251 593/ 252 989

F +91 (8941) 251 591

W www.gmrit.edu.in

// 02 //

SDG 9: Industry, Innovation & Infrastructure	AI/ML, Software Engineering, Cloud & Full-Stack Dev, DevOps	<ul style="list-style-type: none"> Scalable digital platforms Industry 4.0 automation Innovative product development 	<ul style="list-style-type: none"> Full Semester Internship (4 months) Hackathons & Codeathons Technical quizzes & GDs – ACM/CSI/IEEE Projects in International Conferences
SDG 11: Sustainable Cities & Communities	Data Visualization, IoT, Capstone Projects	<ul style="list-style-type: none"> Smart cities and urban mobility IoT for waste, energy, building management Urban data visualization 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Energy-efficient software Green computing practices Ethical design and deployment 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Climate change forecasting Data-driven carbon tracking Disaster response systems 	<ul style="list-style-type: none"> NSS plantation & awareness Climate-focused projects Audit course on Climate Change
SDG 16: Peace, Justice & Strong Institutions	Cyber Security, Ethics & Human Values	<ul style="list-style-type: none"> Secure systems Data privacy & compliance Ethical AI systems 	<ul style="list-style-type: none"> Hackathons on CyberSafety NCC discipline efforts Ethics & IPR workshops NSS outreach
SDG 4: Quality Education	Core Programming, DBMS, AI/ML, Web Dev, etc.	<ul style="list-style-type: none"> Modern curriculum Life-long learning platforms Interactive learning design 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Interdisciplinary collaborations Open data & integration Innovation ecosystems 	<ul style="list-style-type: none"> Industry-academia internships SIH with Ministries International Conferences ACM/CSI/IEEE partnerships