DOMAIN	SUBDOMAINS	SKILLS NEEDED		APPLICATION
BATTERY TECHNOLOGY	Battery Chemistries Battery Manufacturing Battery Managmeent Systems (BMS) Battery Recycling & Re-use	Electrochemistry Materials Science Chemical Engineering Laboratory Research Data Analysis		Electric Vehicles (EVs) Portable Electronics Grid Storage Renewable Energy Integration
RENEWABLE ENERGY TECHNOLOGIES	Solar Technology Wind Energy Hydropower Geothermal Energy Bioenergy	Electrical Engineering Mechanical Engineering Aerodynamics Geographic Information Systems (GIS)	Civil Engineering Materials Science Hydrology Environmental Science Artificial Intellegence (AI) & Machine Learning	Power Generation: Residential & Commercial Heating and cooling Commerical & Industrial Processes Agricultural & Aquaculture Applications Smart Grid Technology Transportation Efficiency Sustainable Manufacturing
ENERGY STORAGE SYSTEMS (ESS)	Grid Storage Distributed Storage Innovative Storage Solutions	Electrochemistry Materials Science Electrical Engineering Power Systems Battery Management Systems Renewable Energy Integration		Grid Stability & Backup Power Renewable Energy Integration Backup power Peak Load Management Residential & Commercial Applications Emergency & Disaster Response Utility-Scale Applications
SMART GRID TECHNOLOGY	Smart Meters & Sensors Grid Automation Demand Response Cybersecurity	IoT (Internet of Things) Sensor Technology Data Analytics Network Engineering Cybersecurity Protocols Machine Learning & Artificial intelligence (AI)	Network Security Software Development Automation Engineering Control Systems SCADA Systems Consumer Behavior Analysis Risk Analysis Algorithm Development	Battery Chemistries Circuit Design Data Analysis and Algorithm Development Software Programming (e.g. Python)
ENERGY EFFICIENCY	Building Energy Efficiency Industrial Energy Efficiency Transportation Efficiency Appliance and Equipment Efficiency	Process Optimization Energy Management Systems Mechanical Engineering Industrial Engineering Automation Automotive Engineering	Product design Energy Performance Testing Regulatory Compliance Electrical Engineering Fuel Technologies Public Transportation Planning	Reducing Energy Consumption Lowering Carbon Footprint Cost Savings
SUSTAINABLE MANUFACTURING	Green Manufacturing Processes Life Cycle Assessment (LCA) Circular Economy Eco-friendly Materials	Sustainable Design, Environmental Engineering Process Engineering Waste Reduction Lean Manufacturing Environmental Science Data Analysis Sustainability Metrics Product Lifecycle Analysis	Industrial Ecology Resource Management Product Design for recyclability Business Strategy Materials Science Chemical Engineering Sustainability Material Development	Energy Efficiency Waste Reduction & Management Biodegradable and Renewable Materials Sustainable Product Design Water Conservation Pollution Control Renewable Energy Integration Circular Economy Practices Sustainability Reporting & Certifications
HYDROGEN & FUEL CELL TECHNOLOGY	Hydrogen Production Hydrogen Production & Distribution Fuel Cells	Chemical Engineering Process Engineering Electrochemistry Mechanical Engineering	Materials Science Safety Engineering Performance Testing Logistics Renewable Energy Integration	Transportation: Fuel Cell Electric Vehicles (FCEVs), Hydrogen Powered Aviation, Marine Transport Power Generation Industrial Applications Residential & Commercial Heating Energy Storage Distribution Environmental & Sustainability Applications
ENVIRONMENTAL IMPACT & POLICY	Environmental Impact Assessment (EIA) Energy Policy & Regulation Sustainability Reporting Climate Change Mitigation	Environmental Science Impact Modeling Regulatory Knowledge Stakeholder Engagement Policy Analysis Economics Law Carbon Management	Public Administration Sustainability Planning Data Analysis Reporting standards (e.g., GRI, SASB), Corporate Sustainability Climate Science Policy Development	Guiding Sustainable Development Shaping Energy Markets Promoting Environmental Stewardship Climate Change Mitigation Natural Resource Management Pollution Control & Waste Management Environmental Education & Awareness