17 PARTNERSHIPS FOR THE GOALS

17.4 Education for the SDGs

Metric	Parameter
17.4.1	Education for SDGs commitment to meaningful education

SDG 17 – PARTNERSHIP FOR GOALS
Education for SDGs: commitment to meaningful education

17.4.1 - Does your university as a body have (full degrees, or electives) that address sustainability and the SDGs?

MITS implements a choice-based credit system offering a wide range of full degree post graduate course and regular/elective courses to the students of under-graduation.

PG COURSES

DEPARTMENT OF MANAGEMENT STUDIES

LINK: https://mits.ac.in/public/uploads/files/2598ed8eb9563228292d9363956431bd.pdf

DEPARTMENT OF COMPUTER APPLICATIONS

LINK: https://mits.ac.in/public/uploads/files/MCA-R22.pdf

M. TECH: COMPUTER SCIENCE & ENGINEERING

LINK: https://mits.ac.in/public/uploads/files/M.Tech%20CSE-R24.pdf

UG COURSES

CIVIL ENGINEERING

LINK: https://mits.ac.in/public/uploads/ugc/B.Tech%20CIVIL%20-%20R23.pdf

Course Code	Course Title	Mapped SDG
20CE101	Fundamentals of Engineering Mechanics	SDG 9 (Industry, Innovation, and Infrastructure)
20CE102	Mechanics of Fluids	SDG 6 (Clean Water and Sanitation)
20CE103	Surveying	SDG 9 (Industry, Innovation, and Infrastructure)

20CE201	Construction Technology Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE202	Surveying Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE203	Mechanics of Fluids Laboratory	SDG 6 (Clean Water and Sanitation)
20CE104	Environmental Engineering	SDG 6 (Clean Water and Sanitation)
20CE105	Engineering Hydrology	SDG 6 (Clean Water and Sanitation)
20CE106	Concrete Technology	SDG 9 (Industry, Innovation, and Infrastructure)
20CE107	Strength of Materials	SDG 9 (Industry, Innovation, and Infrastructure)
20CE204	Advanced Surveying Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE205	Strength of Materials Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE206	Environmental Engineering Laboratory	SDG 6 (Clean Water and Sanitation)
20CE108	Structural Analysis	SDG 9 (Industry, Innovation, and Infrastructure)
20CE109	Irrigation Engineering	SDG 6 (Clean Water and Sanitation)
20CE110	Design of Concrete Structures	SDG 9 (Industry, Innovation, and Infrastructure)
20CE207	Concrete Technology Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE208	Advanced Civil Engineering Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE111	Geotechnical Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE112	Transportation Engineering	SDG 11 (Sustainable Cities and Communities)

20CE113	Design of Steel Structures	SDG 9 (Industry, Innovation, and Infrastructure)
20CE209	Geotechnical Engineering Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE210	Design Laboratory	SDG 9 (Industry, Innovation, and Infrastructure)
20CE211	Transportation Engineering Laboratory	SDG 11 (Sustainable Cities and Communities)
20CE901	Disaster Management	SDG 13 (Climate Action)
20CE401	Engineering Geology	SDG 13 (Climate Action)
20CE402	Construction Planning and Management	SDG 9 (Industry, Innovation, and Infrastructure)
20CE403	Remote Sensing and GIS	SDG 13 (Climate Action)
20CE404	Green Buildings and Energy Conservation	SDG 7 (Affordable and Clean Energy)
20CE405	Air Pollution and Solid Waste Management	SDG 13 (Climate Action)
20CE406	Building Materials and Construction	SDG 9 (Industry, Innovation, and Infrastructure)
20CE407	Advanced Strength of Material	SDG 9 (Industry, Innovation, and Infrastructure)
20CE408	Advanced Geotechnical Engineering-Foundations	SDG 9 (Industry, Innovation, and Infrastructure)
20CE409	Hydraulics and Hydraulic Machines	SDG 6 (Clean Water and Sanitation)
20CE410	Finite Element Analysis	SDG 9 (Industry, Innovation, and Infrastructure)
20CE411	Environmental Impact Assessment	SDG 13 (Climate Action)
20CE412	Traffic Engineering and Management	SDG 11 (Sustainable Cities and Communities)
20CE413	Railways Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE414	Geotechnical Exploration	SDG 9 (Industry, Innovation, and Infrastructure)

20CE415	Estimating and Costing	SDG 9 (Industry, Innovation, and Infrastructure)
20CE416	River Hydraulics and Sediment Transport	SDG 6 (Clean Water and Sanitation)
20CE417	Advanced Structural Analysis	SDG 9 (Industry, Innovation, and Infrastructure)
20CE418	Watershed Management	SDG 6 (Clean Water and Sanitation)
20CE419	Bridge Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE420	Optimization in Structural Design	SDG 9 (Industry, Innovation, and Infrastructure)
20CE421	Offshore Structures	SDG 9 (Industry, Innovation, and Infrastructure)
20CE422	Ground Improvement Techniques	SDG 9 (Industry, Innovation, and Infrastructure)
20CE423	Pavement Design and Analysis	SDG 11 (Sustainable Cities and Communities)
20CE424	Port Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE603	Geospatial Data Analysis with QGIS	SDG 9 (Industry, Innovation, and Infrastructure)
20CE604	3D Design with Google Sketchup	SDG 9 (Industry, Innovation, and Infrastructure)
20CE605	Scilab in Civil Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE606	Python in Civil Engineering	SDG 9 (Industry, Innovation, and Infrastructure)
20CE607	Revit Structure	SDG 9 (Industry, Innovation, and Infrastructure)
20CE608	Revit Architecture	SDG 9 (Industry, Innovation, and Infrastructure)
20CE609	Flood Modelling using HEC-RAS	SDG 13 (Climate Action)

ELECTRONICS AND COMMUNICATION ENGINEERING

LINK: https://mits.ac.in/public/uploads/ugc/B.Tech%20ECE%20-%20R20.pdf

Course Code	Course Title	SDG(s) Mapped
23ECE103	Electronic Devices and Circuits	SDG 7, SDG 9
23ECE104	Digital Circuits Design	SDG 9, SDG 12
23ECE202	Electronic Devices and Circuits Laboratory	SDG 7, SDG 9
23ECE203	Digital Circuits and Signal Simulation Lab	SDG 9, SDG 12
23ECE105	Linear Control Systems	SDG 9, SDG 11
23ECE106	EM Waves and Transmission Lines	SDG 9, SDG 11
23ECE107	Analog Circuits	SDG 7, SDG 9
20ECE416	Digital Image and Video Processing	SDG 9, SDG 11
20ECE417	Wireless Sensor Networks	SDG 9, SDG 13
20ECE418	Satellite Communication	SDG 9, SDG 13
20ECE419	Error Correcting Codes	SDG 9
20ECE420	RFICs	SDG 9
20ECE421	Community Radio Technology	SDG 4, SDG 9
20ECE602	Sensors and Instrumentation	SDG 9, SDG 11
20ECE603	MATLAB for Engineers	SDG 4, SDG 9
20ECE604	PCB Designing	SDG 9
20ECE607	Real-Time Operating Systems (RTOS)	SDG 9
20ECE608	Internet of Things	SDG 9, SDG 11, SDG 13
20ECE609	Digital Signal Processor	SDG 9
20ECE610	Antenna Design	SDG 9, SDG 11
23ECE108	Analog Communication	SDG 9, SDG 11
23ECE204	Analog Circuits Laboratory	SDG 9
23ECE205	Analog Communication Laboratory	SDG 9, SDG 11
20ECE108	Electromagnetic Fields and Transmission Lines	SDG 9, SDG 11
20ECE109	Analog Communication	SDG 9, SDG 11
20ECE110	Digital Signal Processing	SDG 9
20ECE207	Analog Communication Laboratory	SDG 9
20ECE208	Digital Signal Processing Laboratory	SDG 9
20ECE111	VLSI Design	SDG 9
20ECE112	Antenna and Microwave Engineering	SDG 9
20ECE113	Digital Communication	SDG 9
20ECE209	VLSI Design Laboratory	SDG 9
20ECE210	Microwave Engineering Laboratory	SDG 9
20ECE211	Digital Communication Laboratory	SDG 9
20ECE401	Nano Electronics	SDG 9, SDG 12
20ECE402	Electronics Packaging and Testing	SDG 12
20ECE403	Bio-Medical Electronics	SDG 3, SDG 9
20ECE404	Advanced Digital System Design using Verilog	SDG 9
20ECE405	Embedded Systems	SDG 9
20ECE406	Fiber Optic Communication	SDG 9, SDG 11
20ECE407	Software for Embedded Systems	SDG 9
20ECE408	Wireless Communication	SDG 9, SDG 11, SDG 13
20ECE409	FPGA Based System Design	SDG 9
20ECE410	Cognitive Radio	SDG 9

Course Code	Course Title	SDG(s) Mapped
20ECE411	Pattern Recognition and its Applications	SDG 9, SDG 11
20ECE412	Mobile Communication Networks	SDG 9, SDG 11
20ECE413	RADAR Engineering	SDG 9, SDG 11
20ECE414	Speech and Audio Processing	SDG 9, SDG 11
20ECE415	DSP Architecture	SDG 9

DEPARTMENT OF MECHANICAL ENGINEERING

LINK:https://mits.ac.in/public/uploads/ugc/B.Tech%20MECH-R20.pdf

Course Code	Course Title	SDG(s) Mapped
20ME101	Engineering Graphics	4
20ME201	Workshop Practice	4, 9
20ME102	Engineering Mechanics	4, 9
20ME103	Basic Thermodynamics	4, 7, 9
20ME104	Materials Science and Engineering	4, 9, 12
20ME105	Fluid Mechanics and Hydraulic Machinery	6, 7, 9
20ME202	Materials Science and Engineering Laboratory	9, 12
20ME203	Fluid Mechanics and Hydraulic Machinery Laboratory	6, 7, 9
20ME204	3-D Modelling Laboratory	4, 9
20ME106	Mechanics of Solids	4, 9
20ME107	Theory of Machines	4, 9
20ME108	Manufacturing Technology-I	4, 9, 12
20ME205	Manufacturing Technology-I Laboratory	4, 9, 12
20ME206	Mechanics of Solids Laboratory	9, 12
20ME207	Dynamics and Electrical Machines Laboratory	7, 9, 12
20ME109	Design of Machine Elements	4, 9
20ME110	Manufacturing Technology-II	9, 12
20ME111	Heat Transfer	7, 9, 12
20ME208	Manufacturing Technology-II Laboratory	9, 12
20ME209	Thermal Engineering Laboratory	7, 9
20ME112	CAD/CAM	4, 9
20ME113	Automation and Robotics	9, 12
20ME114	Machine Learning for Mechanical Engineers	4, 9
20ME210	CAD/CAM Laboratory	4, 9
20ME211	Robotics Laboratory	9, 12
20ME212	Engineering Metrology and Measurements Laboratory	9, 12
20ME401	Production Planning and Control	8, 9, 12
20ME402	Computational Fluid Dynamics	9, 13
20ME403	Engineering Analysis and Computation	9, 13
20ME404	Fluid Power Systems	7, 9
20ME405	Finite Element Methods	9, 13
20ME406	Fundamentals of Automotive Engineering	9, 12, 13
20ME407	Entrepreneurship and Project Management	8, 9

Course Code	Course Title	SDG(s) Mapped
20ME408	Refrigeration and Air Conditioning	7, 9, 13
20ME409	Internet of Manufacturing Things	9, 12, 13
20ME410	Renewable Energy Systems	7, 9, 13
20ME411	Carbon Footprint Estimation and Reduction Techniques	7, 12, 13
20ME412	Electric Vehicle Technology	7, 9, 13
20ME413	Additive Manufacturing	9, 12
20ME414	Fundamentals of Aerodynamics	9, 13
20ME415	Non-Destructive Testing	9, 12
20ME416	Total Quality Management	9, 12
20ME417	Mechanical Vibrations	9, 12
20ME418	Gas Dynamics and Jet Propulsion	7, 9, 13
20ME419	Manufacturing of Composite Materials	9, 12
20ME420	Power Plant Engineering	7, 9, 13
20ME421	Operations Research	8, 9, 12
20ME601	Design Thinking and Product Innovation	8, 9
20ME602	Computer Modeling for Mechanical Engineering-I	4, 9
20ME603	Computer Modeling for Mechanical Engineering-II	4, 9
20ME604	Advanced Manufacturing Technologies	9, 12, 13

COMPUTER SCIENCE & ENGINEERING

LINK: **https://mits.ac.in/public/uploads/ugc/1ab2970dcf2badeec67b3dcbbcba4b24.pdf**

Course Code	Course Title	SDG(s) Mapped
20CSE101	Programming for Problem Solving (Python)	4, 9, 17
20CSE102	C Programming and Data Structures	4, 9, 17
20CSE201	C Programming and Data Structures Laboratory	4, 9, 17
20CSE202	Engineering and IT Workshop	4, 9, 12, 17
20CSE103	Computer System Architecture	4, 9
20CSE104	Data Structures	4, 9
20CSE105	Object-Oriented Programming using C++	4, 9, 17
20CSE106	Database Management Systems	4, 9, 11
20CSE203	Data Structures Laboratory	4, 9, 17
20CSE204	Object-Oriented Programming using C++ Laboratory	4, 9, 17
20CSE205	Database Management Systems Laboratory	4, 9, 11
20CSE107	Operating Systems Fundamentals	4, 9
20CSE108	JAVA Programming	4, 9, 17
20CSE109	Design and Analysis of Algorithms	4, 9
20CSE206	Operating Systems Fundamentals Laboratory	4, 9
20CSE207	JAVA Programming Laboratory	4, 9, 17
20CSE208	Design and Analysis of Algorithms Laboratory	4, 9
20CSE110	Formal Languages and Automata Theory	4, 9

20CSE111	Computer Networks	4, 9, 11
20CSE112	Machine Learning	4, 9, 12
20CSE209	Computer Networks Laboratory	4, 9, 11
20CSE210	Machine Learning Laboratory	4, 9, 12
20CSE113	Compiler Design	4, 9
20CSE114	Internet of Things	4, 9, 11
20CSE115	Software Engineering	4, 9, 12
20CSE211	Compiler Design Laboratory	4, 9
20CSE212	Internet of Things Laboratory	4, 9, 11
20CSE213	Software Engineering Laboratory	4, 9, 12
20CSE401	Cryptography and Network Security	4, 9, 16
20CSE402	Real-Time Operating Systems	4, 9
20CSE403	Artificial Intelligence	4, 9, 12
20CSE404	Web Technologies	4, 9, 17
20CSE405	Digital Image Processing	4, 9
20CSE406	Data Warehousing and Data Mining	4, 9, 12
20CSE407	Data Visualization Techniques	4, 9, 12
20CSE408	Malware Analysis	4, 9, 16
20CSE409	Network Design and Technologies	4, 9, 11
20CSE410	Design Patterns	4, 9, 12
20CSE411	DevOps	4, 9, 12
20CSE412	Real-Time Systems	4, 9
20CSE413	Deep Learning	4, 9, 12
20CSE414	Exploratory Data Analysis	4, 9, 12
20CSE415	Software Project Management	4, 9, 17
20CSE416	Information Retrieval	4, 9
20CSE417	Big Data Analytics	4, 9, 12
20CSE418	Cyber Security	4, 9, 16
20CSE419	Software Quality Assurance	4, 9
20CSE420	Human-Computer Interaction	4, 9, 10
20CSE421	Database Security	4, 9, 16
20CSE422	Software Defined Networks	4, 9, 11
20CSE423	Reinforcement Learning	4, 9, 12
20CSE601	Web Scripting	4, 9, 17
20CSE602	Android Application Development	4, 9, 17
20CSE603	Multimedia Computing	4, 9
20CSE604	Python for Data Science	4, 9, 12
20CSE605	Full Stack Development	4, 9, 17
20CSE606	AI Tools, Techniques, and Applications	4, 9, 12
20CSE607	Blockchain Architecture	4, 9, 16
20CSE608	NoSQL	4, 9, 12

ELECTRICAL AND ELECTRONICS ENGINEERING

LINK: <u>https://mits.ac.in/public/uploads/ugc/B.Tech%20EEE-R20.pdf</u>

Course Code	Course Title	SDG(s) Mapped
20EEE101	Basic Electrical Engineering	7, 9, 11
20EEE201	Electrical Engineering Laboratory	4, 7
20EEE102	Electrical Circuit Analysis	7, 9
20EEE103	Analog Electronics	7, 9
20EEE104	DC Machines and Transformers	7, 9
20EEE202	Electrical Circuits and Simulation Laboratory	7, 9
20EEE203	Analog Electronics Laboratory	7, 9
20EEE204	DC Machines and Transformers Laboratory	7, 9
20EEE105	Electromagnetic Fields	7, 9, 11
20EEE106	Digital Electronics	9, 11
20EEE107	Induction and Synchronous Machines	7, 9
20EEE108	Control Systems	9, 11
20EEE205	Digital Electronics Laboratory	9, 11
20EEE206	Induction and Synchronous Machines Laboratory	7, 9
20EEE207	Control Systems Laboratory	9, 11
20EEE109	Power Systems – I	7, 9, 13
20EEE110	Power Electronics	7, 9, 13
20EEE111	Micro-controllers and Interfacing	9, 11
20EEE208	Power System – I Laboratory	7, 9, 13
20EEE209	Micro-controllers and Interfacing Laboratory	9, 11
20EEE112	Measurements and Transducers	7, 9
20EEE113	Signals and Systems	9, 11
20EEE114	Power Systems – II (Analysis)	7, 9, 13
20EEE210	Measurements and Transducers Laboratory	7, 9
20EEE211	Power Systems – II Laboratory	7, 9, 13
20EEE212	Power Electronics Laboratory	7, 9, 13
20EEE401	Modern Control Systems	9, 11
20EEE402	Industrial Electrical Systems	9, 12
20EEE403	Special Electrical Machines	7, 9
20EEE404	Electrical Safety	4, 11
20EEE405	Electrical and Hybrid Vehicles	7, 9, 13
20EEE406	Electrical Drives and Control	7, 9
20EEE407	Energy Audit and Conservation Management	7, 9, 12, 13
20EEE408	Introduction to MEMS	9, 11
20EEE409	Switch Gear and Protection	9, 11
20EEE410	Utilization of Electrical Energy	7, 9, 12
20EEE411	HVDC and FACTS	7, 9, 13
20EEE412	Digital Signal Processing	9, 11

20EEE413	Smart Power Grid	7, 9, 11, 13
20EEE414	Power System Operation and Control	7, 9, 11
20EEE415	Wind and Solar Energy Systems	7, 9, 13
20EEE416	Power Quality	7, 9, 11
20EEE601	Electrical Home	9, 11
20EEE602	Data Structures using Python	4, 9, 11
20EEE603	Internet of Things	9, 11
20EEE604	Programming for Electrical and Electronics Eng	4, 9, 11