



**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (MITS)**

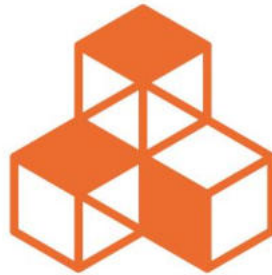
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## **9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**



# **CURRICULUM**



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UG & PG (R25) Regulation Curriculum			SDG linked to the Curriculum	
S.No	Course Code	Course Name	SDG Mapped	Department
1	25BAMATTC01	Engineering Calculus	9	CIVIL,EEE,ECE,MECH
2	25BACSETC01	C Programming for Problem Solving	9	
3	25BAECETC01	Sensors and Transducers	9	
4	25BAENGLC01	Professional Communication Laboratory	9	
5	25BAPHYLC01	Physics Laboratory	9	
6	25BACSELC01	C Programming for Problem Solving Laboratory	9	
7	25BACOMLC01	Engineering Skills Laboratory	9	
8	25BAMATTC04	Linear Algebra and Complex Analysis	9	
9	25BACHETC02	Chemistry for Electronics	9	
10	25BACIVTC02	Introduction to Environment and Sustainability	9	
11	25BAEEETC02	Basic Electrical and Electronics Engineering	9	
12	25BACDSTC01	Fundamentals of Artificial Intelligence	9	
13	25BACHELC02	Applied Chemistry Laboratory	9	
14	25BAEEELC01	Basic Electrical and Electronics Engineering Laboratory	9	
15	25BACOMLC02	Scientific Computing Laboratory	9	
16	25BAMATTC02	Calculus for Computer Science	9	
17	25BACHETC03	SMART Chemistry	9	
18	25BACIVTC02	Introduction to Environment and Sustainability	9	



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<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>SDG Mapped</b>	<b>Department</b>	
19	25BAEEETC03	Digital Design	9	CSE(AI & ML), DS, AI	
20	25BACSETC01	C Programming for Problem Solving	9		
21	25BAMECEC01	Engineering Graphics	9		
22	25BACHELC03	Chemistry Laboratory	9		
23	25BACSELC01	C Programming for ProblemSolving Laboratory	9		
24	25BACOMLC01	Engineering Skills Laboratory	9		
25	25BAMATTC05	Linear Algebra	9		
26	25BAPHYTC03	Modern Physics for QuantumTechnologies	9		
27	25BACSETC03	Data Structures and Algorithms	9		
28	25BACAMTC01	Fundamentals of IntelligentSystems	9		
29	25BAPHYLC01	Physics Laboratory	9		
30	25BACSELC02	IT Essentials Laboratory	9		
31	25BACSELC03	Data Structures and Algorithms Laboratory	9		
32	25MBCSETC01	Advanced Data Structures and Algorithms	9		
33	25MBCSETC02	Modern Database Management Systems	9		
34	25MBCSELC01	Software Defined Network Laboratory	9		
35	25MBCSELC02	Modern Database Management Systems Laboratory	9		
36	25MBCSESC01	Data Science Using Python	9		



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S.No	Course Code	Course Name	SDG Mapped	Department
37	25MBCSETC03	Advanced Machine Learning	9	M. Tech-CSE
38	25MBCSETC04	Advanced Data Visualization Techniques	9	
39	25MBCSELC03	Advanced Machine Learning Laboratory	9	
40	25MBCSELC04	Advanced Data Visualization Techniques Laboratory	9	
41	25MBCSESC02	Prompt Engineering	9	
42	25MBCSEDC01	Natural Language Processing	9	
43	25MBCSEDC02	Social Network Analysis	9	
44	25MBCSEDC04	Big Data Analytics	9	
45	25MBCSEDC06	DevOps	9	
46	25MBCSEDC08	Quantum Computing	9	
47	25MBCSEDC11	Internet of Things	9	
48	25MBVESTC01	CMOS Digital IC Design	9	
49	25MBVESTC02	Advanced Microcontrollers and Signal Processors	9	
50	25MBVESLC01	CMOS Digital IC Design Laboratory	9	
51	25MBVESLC02	Advanced Microcontrollers and Signal Processors Laboratory	9	
52	25MBVESSC01	Scientific Computing	9	
53	25MBVESTC03	CMOS Analog IC Design	9	
54	25MBVESTC04	Embedded System Design	9	



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<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>SDG Mapped</b>	<b>Department</b>
55	25MBVESLC03	CMOS Analog IC Design Laboratory	9	M.TECH -VLSI
56	25MBVESLC04	Embedded System Design Laboratory	9	
57	25MBVESSC02	QNX Based RTOS	9	
58	25MBVESDC01	Communication Buses and Interfaces	9	
59	25MBVESDC02	Data Acquisition System Design	9	
60	25MBVESDC03	FPGA Architectures and Applications	9	
61	25MBVESDC04	Low Power VLSI Design	9	
62	25MBVESDC05	Nano-materials and Nanotechnology	9	
63	25MBVESDC07	Pattern Recognition and Machine Learning	9	
64	25MBVESDC08	Programming Languages for Embedded Software	9	
65	25MBVESDC09	RF IC Design	9	
66	25MBVESDC10	SoC Architecture	9	
67	25MBVESDC11	System Design with Embedded Linux	9	
68	25MBVESDC12	High Speed VLSI Design	9	
69	25MBCSEOM01	Introduction to Industry 4.0 and Industrial Internet of Things	9	
70	25MCMBAAC01	E-Commerce and Digital Markets	9	
71	25MCMBAAC06	Multimedia Technologies	9	
72	25MCMBAPC01	Rural Immersion Project	9	



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S.No	Course Code	Course Name	SDG Mapped	Department	
73	25MCMBAPC02	Comprehensive Project Work	9	MBA	
74	25MCMBASC01	Data Analytics Using Excel and GS	9		
75	25MCMBAAC03	Management Information Systems	9		
76	25MCMBAAC07	Data Analysis using R	9		
77	25MCMBAAC02	Managing Digital Innovation and Transformation	9		
78	25MCMBATC12	Business Data Analytics	9		
79	25MCMBATC13	Business Research and Econometrics	9		
80	25MCMBATC14	Operations Research	9		
81	25MDMBAOM02	Entrepreneurship	9		
82	25MDMBAOM05	Innovation, Business Models and Entrepreneurship	9		
83	25MDMCADC13	Agile Methodologies	9		
84	25MDMCADC16	Software Project Management	9		
85	25MDMCASC03	Prompt Engineering	9		
86	25MDMCAIC01	Full Semester Internship	9		
87	25MDMATTC01	Computational Mathematics	9		
88	25MDMCAEC01	Relational Database Management Systems	9		
89	25MDMCAEC02	Data Structures and Algorithms	9		
90	25MDMCAEC03	Advanced JAVA Programming	9		



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<b>UG &amp; PG (R25) Regulation Curriculum</b>			<b>SDG linked to the Curriculum</b>	
<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>SDG Mapped</b>	<b>Department</b>
91	25MDMCAEC04	Operating Systems	9	MCA
92	25MDMCASC01	Frontend Web Development	9	
93	25MDMCAEC05	Software Engineering and Design Patterns	9	
94	25MDMCAEC06	Artificial Intelligence	9	
95	25MDMCAEC07	Adv. Web Tech. and MERN Stack	9	
96	25MDMCASC02	Mobile Application Development	9	
97	25MDMCADC14	DevOps and Microservices	9	
98	25MDMCADC15	Software Testing	9	
99	25MDMCADC01	Data Analytics and Visualization	9	
100	25MDMCADC02	Machine Learning	9	
101	25MDMCADC03	Natural Language Processing	9	
102	25MDMCADC04	Deep Learning for Computer Vision	9	
103	25MDMCADC09	Cyber Security	9	
104	25MDMCADC10	Applied Cryptography	9	
105	25MDMCADC08	Cloud Security	9	
106	25MDCOMTC01	Research Methodology and IPR	9	
107	25MDMCATC01	Generative AI	9	
108	25MDMCAPC01	Project Dissertation Phase-I	9	



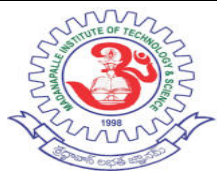
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<b>UG &amp; PG (R25) Regulation Curriculum</b>			<b>SDG linked to the Curriculum</b>	
<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>SDG Mapped</b>	<b>Department</b>
109	25MDMCAPC02	Project Dissertation - II	9	



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<b>B. Tech (R20,R23) Regulation Curriculum</b>			<b>SDG linked to the Curriculum</b>	
<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>SDG Mapped</b>	<b>Department</b>
1	23CME101	Basic Civil and Mechanical Engineering	9	CIVIL
2	23ME101	Engineering Graphics	9	
3	23CE101	Engineering Mechanics	9	
4	23CEE101	Basic Electrical and Electronics Engineering	9	
5	23CE201	Engineering Mechanics and Building Practices Lab	9	
6	23CE102	Strength of Materials	9	
7	23CE103	Surveying	9	
8	23CE202	Surveying Laboratory	9	
9	23CE203	Strength of Materials Laboratory	9	
10	23CE601	Building Planning and Drawing	9	
11	23CSE101	Introduction to Programming	9	
12	23CSE201	Computer Programming Laboratory	9	
13	23CSE202	IT Workshop	9	
14	23ECE103	Electronic Devices and Circuits	9	
15	23ECE104	Digital Circuits Design	9	
16	23ECE202	Electronic Devices and Circuits Laboratory	9	
17	23ECE203	Digital Circuits and Signal Simulation Lab	9	
18	23ECE105	Linear Control Systems	9	
19	23ECE106	EM Waves and Transmission Lines	9	

20	23ECE107	Analog Circuits	9
21	20ECE416	Digital Image and Video Processing	9
22	20ECE417	Wireless Sensor Networks	9
23	20ECE418	Satellite Communication	9
24	20ECE419	Error Correcting Codes	9
25	20ECE420	RFICs	9
26	20ECE421	Community Radio Technology	9
27	20ECE602	Sensors and Instrumentation	9
28	20ECE603	MATLAB for Engineers	9
29	20ECE604	PCB Designing	9
30	20ECE607	Real-Time Operating Systems (RTOS)	9
31	20ECE608	Internet of Things	9
32	23ECE108	Analog Communication	9
33	23ECE204	Analog Circuits Laboratory	9
34	23ECE205	Analog Communication Laboratory	9
35	20ECE108	Electromagnetic Fields and Transmission Lines	9
36	20ECE109	Analog Communication	9
37	20ECE110	Digital Signal Processing	9
38	20ECE207	Analog Communication Laboratory	9
39	20ECE208	Digital Signal Processing Laboratory	9
40	20ECE111	VLSI Design	9
41	20ECE112	Antenna and Microwave Engineering	9
42	20ECE113	Digital Communication	9
43	20ECE209	VLSI Design Laboratory	9
44	20ECE210	Microwave Engineering Laboratory	9
45	20ECE211	Digital Communication Laboratory	9
46	20ECE401	Nano Electronics	9
47	20ECE402	Electronics Packaging and Testing	9

ECE

48	20ECE405	Embedded Systems	9
49	20ECE406	Fiber Optic Communication	9
50	20ECE407	Software for Embedded Systems	9
51	20ECE408	Wireless Communication	9
52	20ECE409	FPGA Based System Design	9
53	20ECE410	Cognitive Radio	9
54	20ECE411	Pattern Recognition and its Applications	9
55	20ECE412	Mobile Communication Networks	9
56	20ECE413	RADAR Engineering	9
57	20ECE414	Speech and Audio Processing	9
58	20ECE415	DSP Architecture	9
59	20ME101	Engineering Graphics	9
60	20ME102	Engineering Mechanics	9
61	20ME104	Materials Science and Engineering	9
62	20ME105	Fluid Mechanics and Hydraulic Machinery	9
63	20ME109	Design of Machine Elements	9
64	20ME112	CAD/CAM	9
65	20ME113	Automation and Robotics	9
66	20ME114	Machine Learning for Mechanical Engineers	9
67	20ME401	Production Planning and Control	9
68	20ME402	Computational Fluid Dynamics	9
69	20ME403	Engineering Analysis and Computation	9
70	20ME406	Fundamentals of Automotive Engineering	9
71	20ME407	Entrepreneurship and Project Management	9
72	20ME409	Internet of Manufacturing Things	9
73	20ME411	Carbon Footprint Estimation and Reduction	9
74	20ME601	Design Thinking and Product Innovation	9
75	20ME602	Computer Modeling for Mechanical Eng.-I	9

MECH

76	20ME603	Computer Modeling for Mechanical Eng.-II	9
77	20ME604	Advanced Manufacturing Technologies	9
78	20CSE101	Programming for Problem Solving (Python)	9
79	20CSE102	C Programming and Data Structures	9
80	20CSE201	C Programming and Data Structures Lab	9
81	20CSE202	Engineering and IT Workshop	9
82	20CSE103	Computer System Architecture	9
83	20CSE104	Data Structures	9
84	20CSE105	Object-Oriented Programming using C++	9
85	20CSE106	Database Management Systems	9
86	20CSE203	Data Structures Laboratory	9
87	20CSE204	Object-Oriented Programming Lab	9
88	20CSE205	Database Management Systems Laboratory	9
89	20CSE107	Operating Systems Fundamentals	9
90	20CSE108	JAVA Programming	9
91	20CSE109	Design and Analysis of Algorithms	9
92	20CSE206	Operating Systems Laboratory	9
93	20CSE207	JAVA Programming Laboratory	9
94	20CSE208	Design and Analysis of Algorithms Lab	9
95	20CSE110	Formal Languages and Automata Theory	9
96	20CSE111	Computer Networks	9
97	20CSE112	Machine Learning	9
98	20CSE114	Internet of Things	9
99	20CSE115	Software Engineering	9
100	20CSE113	Compiler Design	9
101	20CSE401	Cryptography and Network Security	9
102	20CSE402	Real-Time Operating Systems	9
103	20CSE403	Artificial Intelligence	9

CSE

104	20CSE404	Web Technologies	9
105	20CSE405	Digital Image Processing	9
106	20CSE406	Data Warehousing and Data Mining	9
107	20CSE407	Data Visualization Techniques	9
108	20CSE408	Malware Analysis	9
109	20CSE409	Network Design and Technologies	9
110	20CSE410	Design Patterns	9
111	20CSE411	DevOps	9
112	20CSE412	Real-Time Systems	9
113	20CSE413	Deep Learning	9
114	20CSE414	Exploratory Data Analysis	9
115	20CSE415	Software Project Management	9
116	20CSE416	Information Retrieval	9
117	20CSE417	Big Data Analytics	9
118	20CSE418	Cyber Security	9
119	20CSE419	Software Quality Assurance	9
120	20CSE420	Human-Computer Interaction	9
121	20CSE421	Database Security	9
122	20CSE422	Software Defined Networks	9
123	20CSE423	Reinforcement Learning	9
124	20EEE101	Basic Electrical Engineering	9
125	20EEE102	Electrical Circuit Analysis	9
126	20EEE103	Analog Electronics	9
127	20EEE104	DC Machines and Transformers	9
128	20EEE105	Electromagnetic Fields	9
129	20EEE106	Digital Electronics	9
130	20EEE107	Induction and Synchronous Machines	9
131	20EEE108	Control Systems	9

132	20EEE109	Power Systems – I	9	EEE
133	20EEE110	Power Electronics	9	
134	20EEE111	Micro-controllers and Interfacing	9	
135	20EEE112	Measurements and Transducers	9	
136	20EEE113	Signals and Systems	9	
137	20EEE114	Power Systems – II (Analysis)	9	
138	20EEE401	Modern Control Systems	9	
139	20EEE402	Industrial Electrical Systems	9	
140	20EEE403	Special Electrical Machines	9	
141	20EEE404	Electrical Safety	9	
142	20EEE405	Electrical and Hybrid Vehicles	9	
143	20EEE406	Electrical Drives and Control	9	
144	20EEE407	Energy Audit and Conservation Management	9	
145	20EEE408	Introduction to MEMS	9	
146	20EEE409	Switch Gear and Protection	9	
147	20EEE410	Utilization of Electrical Energy	9	
148	20EEE411	HVDC and FACTS	9	
149	20EEE412	Digital Signal Processing	9	
150	20EEE413	Smart Power Grid	9	
151	20EEE414	Power System Operation and Control	9	
152	20CSE101	Programming for Problem Solving (Python)	9	CSE(DS)
153	20CSE102	C Programming and Data Structures	9	
154	20CSE104	Object Oriented Programming	9	
155	20CSE201	C Programming and Data Structures Laboratory	9	
156	20CSE104	Data Structures	9	
157	20CSE109	Fundamentals of Machine Learning	9	
158	20CSE201	Big Data Analytics	9	
159	20CST101	Digital Design	9	

160	20CST102	Data Structures and Algorithms	9
161	20CST103	Database Systems	9
162	20CST104	Computer Architecture	9
163	20CST105	Network and Communication	9
164	20CST107	Operating Systems	9
165	20CST108	Automata Theory and Compiler Design	9
166	20CST109	AI Tools, Techniques and Applications	9
167	20CST110	Software Engineering	9
168	20CST112	Cloud Computing	9
169	20CST113	Internet and Web Programming	9
170	20CST114	Cloud Computing	9
171	20CST420	Data Analytics and Visualization	9
172	20CST413	Fundamentals of Fog and Edge Computing	9
173	20CSC103	Computer System Architecture	9
174	20CSC113	Cloud Computing	9
175	20CSC114	Foundation of Cryptography	9
176	20CSC115	AI Tools, Techniques and Applications	9
177	20CSC110	Automata Theory and Compiler Design	9
178	20CSC111	Computer Networks	9
179	20CSC112	Software Engineering	9
180	20CSC213	AI Tools, Techniques and Applications Laboratory	9
181	23CSC102	Database Management Systems	9
182	23CSC103	Digital Logic and Computer Organization	9
183	23CSC111	Computer Networks	9
184	23CSC602	Full Stack Development-I	9
185	22MCAP102	Database Management Systems	9
186	22MCAP103	Computer Organization and Architecture	9
187	22MCAP104	Operating Systems	9

CST

CSE(CS)

188	22MCAP105	Computer Networks	9
189	22MCAP106	Full Stack Web Development	9
190	22MCAP110	Artificial Intelligence	9
191	22MCAP203	Full Stack Web Development Laboratory	9
192	22MCAP401	Machine Learning - Algorithms and Applications	9
193	22MCAP402	IoT Technology and Applications	9
194	22MCAP406	Blockchain Technology	9
195	22MCAP407	XML and Web Services	9
196	22MCAP408	Deep Learning	9
197	22MCAP409	Wireless Sensor Networks	9
198	22MCAP410	Software Quality Assurance and Testing	9
199	22MCAP411	Virtual Reality	9
200	22MCAP412	Video Analytics	9
201	22MCAP413	Software Development using Blockchain	9
202	22MCAP414	Advanced Web Development	9
203	22MCAP416	Privacy and Security in IoT	9
204	22MCAP418	Generative AI	9
205	22MCAP419	Computer Vision	9
206	22MCAP420	Cyber Security using Blockchain	9
207	22MCAP421	.Net Framework and C#	9

MCA