9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

CURRICULUM

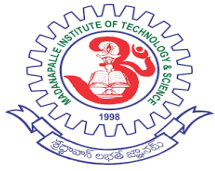# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC-AUTONOMOUS INSTITUTION)
Affiliated to JNTUA, Ananthapuramu & Approved by AICTE, New Delhi

NAAC Accredited with A+ Grade, NIRF India Rankings 2024-Band: 201-300 (Engg.)

NBA Accredited - B.Tech. (CIVIL, CSE, CST, ECE, EEE, MECH), MBA & MCA

B. Tech (R20,R23) Regulation Curriculum			**SDG linked to the Curriculum**	
S.No	Course Code	Course Name	SDG Mapped	Department
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	ECE
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	

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	MECH
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	

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	CSE
101	20CSE401	Cryptography and Network Security	9	
102	20CSE402	Real-Time Operating Systems	9	
103	20CSE403	Artificial Intelligence	9	

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	CST
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	CSE(CS)
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	

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	MCA
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	