

ADITYA ENGINEERING COLLEGE

An Autonomous Institution

Approved by AICTE • Permanently Affiliated to JNTUK • Accredited by NAAC with 'A' Grade
Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956

Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

1.1.2 Syllabus revision Carried out (Program wise) in the academic year 2022-23

This is to certify that the following list of programs are offered during the academic year 2022-23

S.No.	Program Code	Program Name
1	1	B. Tech (Civil Engineering)
2	2	B. Tech (Electrical and Electronics Engineering)
3	3	B. Tech (Mechanical Engineering)
4	4	B. Tech (Electronics and Communication Engineering)
5	5	B. Tech (Computer Science and Engineering)
6	12	B. Tech (Information Technology)
7	26	B. Tech (Mining Engineering)
8	27	B. Tech (Petroleum Technology)
9	35	B. Tech (Agriculture Engineering)
10	65	B. Tech (Artificial Intelligence and Machine Learning)
11	41	B. Tech (Data Science)
12	87	M. Tech (Structural Engineering)
13	52	M. Tech (Power Electronics and Drives)
14	72	M. Tech (VLSI Design)
15	21	M. Tech (Thermal Engineering)
16	58	M. Tech (Computer Science and Engineering)
17	8	M. Tech (Petroleum Engineering)
18	1E	Master of Business Administration
19	IM	Integrated Master of Business Administration
20	IF	Master of Computer Applications


Convener

Academic Committee





Principal

PRINCIPAL
Aditya Engineering College
SURAMPALAM

Syllabus revision Carried out (Program Wise) in the academic year 2022-23

S.No.	Program Code	Program Name	% revision carried
1	1	B. Tech (Civil Engineering)	43.6
2	2	B. Tech (Electrical and Electronics Engineering)	32.96
3	3	B. Tech (Mechanical Engineering)	28.33
4	4	B. Tech (Electronics and Communication Engineering)	41.07
5	5	B. Tech (Computer Science and Engineering)	24.17
6	12	B. Tech (Information Technology)	28.33
7	26	B. Tech (Mining Engineering)	20
8	27	B. Tech (Petroleum Technology)	23
9	35	B. Tech (Agriculture Engineering)	11.11


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Program Name : B.Tech. in Civil Engineering

Syllabus Revision for the Academic Year 2022-2023

S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	201HS1T01	Communicative English	0
2		201BS1T01	Differential equations and Linear algebra	0
3		201BS1T03	Engineering Physics	0
4		201ES1T02	Building Materials & Construction	0
5		201ES1I01	Engineering Graphics	0
6		201HS1L01	Communicative English Lab	0
7		201BS1L02	Engineering Physics Lab	0
8		201ES1L02	Engineering Workshop	0
9		201MC1T01	Environmental Science	0
10	II	201BS2T05	Partial Differential Equations and Vector Calculus	0
11		201BS2T06	Chemistry of Materials	0
12		201ES2T07	Engineering Mechanics	0
13		201ES2T09	Programming for Problem Solving Using C	0
14		201ES2T13	Surveying	0
15		201ES2L06	Surveying field Work	0
16		201ES2L09	Engineering Chemistry Lab	0
17		201ES2L11	Programming for Problem Solving Using C Lab	0

18		201MC2L01	Professional communications skills Lab	0
19		201MC2T02	Constitution of India	0
20	III	201BS3T12	Integral transforms and applications of Partial Differential Equations	0
21		201CE3T01	Strength of Materials-I	0
22		201CE3T02	Fluid Mechanics	0
23		201CE3T03	Structural Analysis	0
24		201CE3T04	Concrete Technology	0
25		201CE3L01	Building Planning & Drawing Lab	0
26		201CE3L02	Concrete Technology Lab	0
27		201CE3L03	Strength of Materials Lab	0
28		201SC3L01	CAD Lab	0
29		201MC3T03	Biology for Engineers	0
30		IV	201BS4T15	Numerical Methods and Statistical Techniques
31	201CE4T05		Engineering Geology	0
32	201CE4T06		Strength of Materials-II	0
33	201CE4T07		Hydraulics & Hydraulic Machinery	0
34	201HS4T02		Management Science	0
35	201CE4T08		Soil Mechanics	0
36	201CE4L04		Engineering Geology Lab	0
37	201CE4L05		FM & HM Lab	0
38	201SC4L13		3D Modeling using Revit	0
39	201MC4T04		Essence of Indian Traditional Knowledge	0
40		201CE5T01	Design and Drawing of Reinforced concrete structures	0
41		201CE5T02	Foundation Engineering	0

42	201CE5T03	Remote sensing & Geo Informatic Systems Applications	0
43	201CE5E01	Pre stressed Concrete	0
44	201CE5E02	Subsurface Investigation and Instrumentation	0
45	201CE5E03	Airport Planning and Design	0
46	201CE5E04	Hydropower Development	100
47	201CE5E05	Environmental Pollution and Control	0
48	201EE5O01	DC Machines and Transformers	0
49	201EE5O02	Analog Electronic Circuits	100
50	201EE5O03	Basic Electrical Measurements	0
51	201ME5O01	Renewable Energy Sources	0
52	201ME5O02	Fundamentals of Mechanical Engineering	100
53	201ME5O03	Supply Chain Management	0
54	201ME5O04	3D Printing	0
55	201ME5O05	Entrepreneurship Development and Incubation	0
56	201ME5O06	Automobile Engineering	100
57	201EC5O01	Principles of Signals and Systems	100
58	201EC5O02	Introduction to Internet of Things	0
59	201EC5O03	Switching Theory and Logic Design	100
60	201CS5O01	Object Oriented Programming through Java	0
61	201CS5O02	Data Base Management Systems	0
62	201IT5O01	Computer Organization	100
63	201IT5O02	Computer Graphics	0
64	201PT5O01	Fundamentals of Petroleum Industry	0
65	201PT5O02	Fundamentals of Chemical Industry	100

66	201MI5O01	Overview of Mining	0
67	201AG5O01	Basic Crop Production Practices	0
68	201AG5O02	Groundwater, Wells and Pumps	100
69	201CE5L01	Geo Informatic Systems & Computer Aided Design Lab	0
70	201CE5L02	Soil Mechanics Lab	0
71	201CE5S01	Skill Oriented Course-III BIM	100
72	201CE5P01	Summer Internship-I	0
73	201MC5T01	IPR & P	0
74	201CE6T01	Irrigation and water resources engineering	0
75	201CE6T02	Transportation Engineering	0
76	201CE6T03	Design of Structural steel Buildings	0
77	201CE6T04	Environmental Engineering	0
78	201CE6E01	Repair and Rehabilitation of Structures	0
79	201CE6E02	Ground Improvement Techniques	0
80	201CE6E03	Railway Engineering	0
81	201CE6E04	Urban Hydrology	0
82	201CE6E05	Air pollution Engineering	0
83	201EE6O01	Induction and Synchronous Machines	100
84	201EE6O02	Non-Conventional Energy Resources	0
85	201EE6O03	Energy Audit, Conservation and Management	0
86	201ME6O01	Solar Energy Utilisation	0
87	201ME6O02	Basic Thermodynamics and Heat Transfer	0
88	201ME6O03	Introduction to Hydraulics and Pneumatics	0
89	201ME6O04	3D Printing	0

90	VI	201ME6O05	Robotics	0
91		201ME6O06	Management Science	0
92		201ME6O07	Entrepreneurship Development and Incubation	0
93		201ME6O08	Automotive Aerodynamics	0
94		201EC6O01	Principles of Communications	0
95		201EC6O02	Biomedical Instrumentation	0
96		201EC6O03	ECAD Tools	0
97		201CS6O01	Python Programming	0
98		201CS6O02	Web Technologies	0
99		201IT6O01	Operating Systems	0
100		201IT6O02	Robotic Process Automation	0
101		201PT6O01	Unconventional Hydrocarbon Resources	0
102		201PT6O02	Asset Management	0
103	201MI6O01	Industrial Safety Practices	0	
104	201MI6O02	Electrical Equipment In Mines	0	
105	201AG6O01	Engineering Properties of Agricultural Produce	0	
106	201AG6O02	Plastic Applications In Agriculture	100	
107	201CE6L01	Transportation Engineering Lab	0	
108	201CE6L02	Environmental Engineering Lab	0	
109	201CE6S01	<u>Skill Oriented Course-IV Employability Skills</u>	0	
110	201MC6T01	Professional Ethics and Human Values	0	
111	191CE7T16	Environmental Engineering	0	
112	191CE7T17	Prestressed concrete	0	
113	191CE7T18	Estimation, specification & Contracts	0	

114	191CE7E17	Design of Tall Buildings	0
115	191CE7E16	Advanced Foundation Engineering	0
116	191CE7E20	Traffic Engineering	0
117	191CE7E19	Sustainable Water Resources Development	100
118	191CE7E18	Environmental Impact Assessment	0
119	191CE7E21	Advanced Structural Analysis	0
120	191CE7E22	Geo- techniques for Design of Underground Structures	100
121	191CE7E25	Traffic Analysis	100
122	191CE7E24	River Basin Management	100
123	191CE7E23	Remote Sensing and GIS	0
124	191EE7O07	Electrical and Hybrid Vehicles	100
125	191EE7O08	Special Electrical Machines	100
126	191EE7O09	Industrial Electrical Systems	100
127	191ME7O13	Optimization techniques	0
128	191ME7O14	Energy Conservation	0
129	191ME7O15	Introduction to Material Handling Systems	0
130	191ME7O16	Robotics	0
131	191ME7O17	Entrepreneurship Development and Incubation	0
132	191EC7O06	Overview of Digital Signal Processing	100
133	191EC7O07	Basics of VLSI Design	100
134	191EC7O08	Micro Electro Mechanical Systems	100
135	191EC7O09	Image Processing	100
136	191CS7O10	Big Data Analytics	0
137	191CS7O11	Mobile Application Development	100

VII

138	191CS7O12	Data Science	0
139	191IT7O06	Machine Learning	100
140	191IT7O07	Quantum Computing	100
141	191IT7O08	Block Chain Technologies	0
142	191MI7O04	Communication System in Mines	100
143	191MI7O05	Drilling & Blasting	100
144	191PT7O05	Introduction to Earth Sciences	0
145	191PT7O06	Basic Concepts in Petroleum Drilling and Completions	100
146	191AG7O04	Greenhouse Technology	100
147	191AG7O05	Floods and Control Measures	100
148	191CE7L06	Environmental Engineering Lab	0
149	191CE7P03	Internship	0
150	191CE7P04	Project Part 1	100
151	191CE8E30	Sustainable Materials and Green Buildings	100
152	191CE8E27	Geo-synthetics and Reinforced soil structures	100
153	191CE8E28	Infrastructure planning and Management	0
154	191CE8E29	Subsurface exploration importance and techniques	0
155	191CE8E26	Environmental Remediation of Contaminated Sites	100
156	191EE8O10	Fundamentals of Electrical Engineering	100
157	191EE8O11	Basic Electrical Circuits	100
158	191EE8O12	Electrical Machines	100
159	191EE8O13	Power Electronics	100
160	191EE8O14	Non-Conventional Energy Sources	100
161	191ME8O18	Fabrication processes	100

162	VIII	191ME8019	Smart Materials	100
163		191EC8010	Micro Electro Mechanical Systems	100
164		191EC8011	Basic Electronic Circuits	100
165		191EC8012	Principles of Communications	100
166		191EC8013	Electronic Instrumentation	100
167		191EC8014	Digital Image Processing	100
168		191CS8013	Cyber Security	0
169		191CS8014	Data Science	100
170		191IT8012	Game Programming	100
171		191IT8011	Cloud Computing	100
172		191CS8016	AR / VR	0
173		191IT8009	Deep learning	100
174		191IT8010	Block Chain Technologies	0
175		191PT8007	Chemical Process Safety	100
176		191PT8008	Mechanical Unit Operations	100
177		191AG8006	Applications of RS and GIS in Land and water resource management	0
178		191AG8007	Plastic Applications in Agriculture	100
179		191CE8P05	Project Part 2	0
Total number of courses in the academic year 2022-2023				= 179
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2021-2022				= 59
Percentage of syllabus revision carried out in the academic year 2021-2022 = $(57/139)*100$				= 32.96 %

P. Datta
Program Coordinator

[Signature]
Head of the Department
Head of the Department
Dept. of Civil Engineering
ADITYA ENGINEERING COLLEGE (A9)



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Date: 16-08-2022

Department of Civil Engineering

List of Elective Courses in the Academic Year 2022-2023 for the B. Tech. (Civil Engineering)

S. No	Semester	Course type	Course Code	Course Name
1	V	Professional Elective-I	201CE5E01	Pre stressed Concrete
2	V	Professional Elective-I	201CE5E02	Subsurface Investigation and Instrumentation
3	V	Professional Elective-I	201CE5E03	Airport Planning and Design
4	V	Professional Elective-I	201CE5E04	Hydropower Development
5	V	Professional Elective-I	201CE5E05	Environmental Pollution and Control
6	V	Open Elective-I	191CE5O01	Basic Concrete Technology
7	V	Open Elective-I	201CE5O02	Waste Water Management
8	V	Open Elective-I	201CE5O03	Basic Surveying
9	VI	Professional Elective-II	201CE6E01	Repair and Rehabilitation of Structures
10	VI	Professional Elective-II	201CE6E02	Ground Improvement Techniques
11	VI	Professional Elective-II	201CE6E03	Railway Engineering
12	VI	Professional Elective-II	201CE6E04	Urban Hydrology
13	VI	Professional Elective-II	201CE6E05	Air pollution Engineering
14	VI	Open Elective-II	201CE6O01	Repair and Rehabilitation of Structures
15	VI	Open Elective-II	201CE6O02	Industrial Waste Water Management
16	VI	Open Elective-II	201CE6O03	Roadways, Railways and Airways
17	VII	Professional Elective-IV	191CE7E17	Design of Tall Buildings

18	VII	Professional Elective-IV	191CE7E16	Advanced Foundation Engineering
19	VII	Professional Elective-IV	191CE7E20	Traffic Engineering
20	VII	Professional Elective-IV	191CE7E19	Sustainable Water Resources Development
21	VII	Professional Elective-IV	191CE7E18	Environmental Impact Assessment
22	VII	Professional Elective-V	191CE7E21	Advanced Structural Analysis
23	VII	Professional Elective-V	191CE7E22	Geo- techniques for Design of Underground Structures
24	VII	Professional Elective-V	191CE7E25	Traffic Analysis
25	VII	Professional Elective-V	191CE7E24	River Basin Management
26	VII	Professional Elective-V	191CE7E23	Remote Sensing and GIS
27	VII	Open Elective-III	191CE7O03	Waste Water Management
28	VIII	Professional Elective-VI	191CE8E30	Sustainable Materials and Green Buildings
29	VIII	Professional Elective-VI	191CE8E27	Geo-synthetics and Reinforced soil structures
30	VIII	Professional Elective-VI	191CE8E28	Infrastructure planning and Management
31	VIII	Professional Elective-VI	191CE8E29	Subsurface exploration importance and techniques
32	VIII	Professional Elective-VI	191CE8E26	Environmental Remediation of Contaminated Sites
33	VIII	Open Elective-IV	191CE8O04	Integrated Waste Management for a Smart City


Head of the Department
 Head of the Department
 Dept. of Civil Engineering
 ADITYA ENGINEERING COLLEGE (A9)