



ADITYA ENGINEERING COLLEGE

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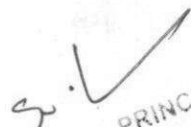
Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

Program Name : B.Tech. in Civil Engineering


Syllabus Revision for the Academic Year 2021-2022				
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	201HS1T01	Communicative English	0
2	I	201BS1T01	Differential equations and Linear algebra	0
3	I	201BS1T03	Engineering Physics	0
4	I	201ES1T02	Building Materials & Construction	0
5	I	201ES1I01	Engineering Graphics	0
6	I	201HS1L01	Communicative English Lab	0
7	I	201BS1L02	Engineering Physics Lab	0
8	I	201ES1L02	Engineering Workshop	0
9	I	201MC1T01	Environmental Science	0
10	II	201BS2T05	Partial Differential Equations and Vector Calculus	0
11	II	201BS2T06	Chemistry of Materials	0
12	II	201ES2T07	Engineering Mechanics	0
13	II	201ES2T09	Programming for Problem Solving Using C	0
14	II	201ES2T13	Surveying	0
15	II	201ES2L06	Surveying field Work	0
16	II	201ES2L09	Engineering Chemistry Lab	0

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17	II	201ES2L11	Programming for Problem Solving Using C Lab	0
18	II	201MC2L01	Professional communications skills Lab	0
19	II	201MC2T02	Constitution of India	0
20	III	201BS3T12	Integral transforms and applications of Partial Differential Equations	0
21	III	201CE3T01	Strength of Materials-I	0
22	III	201CE3T02	Fluid Mechanics	0
23	III	201CE3T03	Structural Analysis	0
24	III	201CE3T04	Concrete Technology	0
25	III	201CE3L01	Building Planning & Drawing Lab	0
26	III	201CE3L02	Concrete Technology Lab	0
27	III	201CE3L03	Strength of Materials Lab	0
28	III	201SC3L01	CAD Lab	100
29	III	201MC3T03	Biology for Engineers	0
30	IV	201BS4T15	Numerical Methods and Statistical Techniques	0
31	IV	201CE4T05	Engineering Geology	0
32	IV	201CE4T06	Strength of Materials-II	0
33	IV	201CE4T07	Hydraulics & Hydraulic Machinery	0
34	IV	201HS4T02	Management Science	0
35	IV	201CE4T08	Soil Mechanics	0
36	IV	201CE4L04	Engineering Geology Lab	0
37	IV	201CE4L05	FM & HM Lab	0
38	IV	201SC4L13	3D Modeling using Revit	100


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39	IV	201MC4T04	Essence of Indian Traditional Knowledge	0
40	V	191CE5T09	Irrigation & water resource Engineering	33
41	V	191CE5T10	Engineering geology	0
42	V	191CE5T11	Design & drawing of Reinforced concrete structures	0
43	V	191CE5T12	Geotechnical engineering	0
44	V	191CE5E02	PE I Construction Technology & Management	50
45	V	191CE5E04	Subsurface Investigation and Instrumentation	100
46	V	191CE5E01	Airport Planning and Design	100
47	V	191CE5E05	Urban Hydrology	17
48	V	191CE5E03	Environmental Pollution and Control	100
49	V	191EE5O01	OE I Electrical Safety	100
50	V	191EE5O02	Electrical Materials	100
51	V	191EE5O03	Basic Electrical Measurements	100
52	V	191ME5O02	Fundamentals of Mechanical Engineering	100
53	V	191ME5O03	Supply Chain Management	100
54	V	191ME5O04	3D Printing	100
55	V	191ME5O05	Entrepreneurship Development and Incubation	100
56	V	191EC5O01	Signals & Systems	100
57	V	191EC5O02	Digital Electronics and Logic Design	100
58	V	191EC5O03	Semi conductor devices	100
59	V	191CS5O01	Data Structures	100
60	V	191CS5O02	Object Oriented Programming through C++	100


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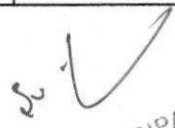
61	V	191CS5O03	Java Programming	100
62	V	191CS5O04	R Programming	100
63	V	191IT5O01	Data Base Management Systems	100
64	V	191IT5O02	Computer Graphics	100
65	V	191MI5O01	Overview of Mining	100
66	V	191PT5O01	Process Intensification in Petroleum Industry	100
67	V	191PT5O02	Fundamentals of Petroleum Industry	100
68	V	191AG5O01	Basic Crop Production Practices	100
69	V	191CE5L05	Engineering geology lab	0
70	V	191CE5L06	Geotechnical engineering lab	0
71	V	191HS5T06	Employability Skills - III	0
72	V	191PR5P02	Socially Relevant Project	100
73	V	191MC5A07	Survey camp	0
74	VI	191CE6T13	Design & drawing of steel Structures	0
75	VI	191CE6T14	Highway engineering	0
76	VI	191CE6T15	Foundation engineering	0
77	VI	191CE6E10	PE-II Repair and Rehabilitation of Structures	0
78	VI	191CE6E07	Ground Improvement Techniques	0
79	VI	191CE6E09	Railway Engineering	100
80	VI	191CE6E08	Hydropower Development	100
81	VI	191CE6E06	Air Pollution Engineering	0
82	VI	191CE6E13	PE -III Finite Element Methods	0


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83	VI	191CE6E12	Expansive Soils	100
84	VI	191CE6E11	Docks and Harbour Engineering	100
85	VI	191CE6E15	Water Resources System Analysis	100
86	VI	191CE6E14	Industrial Waste & Waste-Water Engineering	100
87	VI	191EE6O04	OE II Energy Audit and Conservation Management	100
88	VI	191EE6O05	Non Conventional Energy resources	100
89	VI	191EE6O06	Instrumentation	100
90	VI	191ME6O06	Solar Energy Utilisation	100
91	VI	191ME6O07	Basic Thermodynamics and Heat Transfer	100
92	VI	191ME6O09	3D Printing	100
93	VI	191ME6O06	Robotics	100
94	VI	191ME6O12	Entrepreneurship Development and Incubation	100
95	VI	191ME6O07	Biomedical Instrumentation	100
96	VI	191ME6O08	ECAD Tools	100
97	VI	191CS6O05	Python Programming	100
98	VI	191CS6O06	Operating Systems	100
99	VI	191CS6O07	Web Technologies	100
100	VI	191CS6O08	Cyber Security	100
101	VI	191CS6O09	AR / VR	100
102	VI	191IT6O03	Computer Organization	100
103	VI	191IT6O04	AI Tools & Techniques	100
104	VI	191AG6O03	Bio-energy systems design and applications	100



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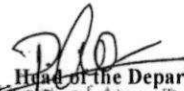
105	VI	191IT6O05	Robotic Process Automation	100
106	VI	191MI6O02	Industrial Safety Practices	100
107	VI	191MI6O03	Electrical Equipment's in Mines	100
108	VI	191PT6O03	Unconventional Hydrocarbon Resources	100
109	VI	191PT6O04	Asset Management	100
110	VI	191AG6O02	Weather forecast in Agriculture	100
111	VI	191CE6L07	Transportation engineering lab	0
112	VI	191CE6L08	Computer aided design lab	0
113	VI	191CE6L09	Irrigation design & drawing	0
114	VI	191HS6T07	Employability skills - IV	0
115	VII	171CE7T18	Geotechnical Engineering - II	0
116	VII	171CE7T19	Environmental Engineering	0
117	VII	171CE7T20	Remote Sensing and GIS Applications	0
118	VII	171CE7T21	Estimation, Specifications and Contracts	0
119	VII	171CE7E10	PE IV Advanced Structural Engineering	0
120	VII	171CE7E11	Watershed Management	0
121	VII	171CE7E12	Design of Tall Buildings	0
122	VII	171CE7E13	PE V Bridge Engineering	0
123	VII	171CE7E14	Environmental Impact Assessment and Management	0
124	VII	171CE7E15	Water Resources Systems Planning	0
125	VII	171CE7L08	Environmental Engineering Lab	0
126	VII	171CE7L09	GIS And Computer Aided Design (CAD) Lab	0


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127	VII	171CE7P01	Industry Oriented (Internship) Minor Project	0
128	VIII	171CE8E16	PE VI Urban Transportation Planning Engineering	0
129	VIII	171CE8E17	Soil Dynamics and Foundations	0
130	VIII	171CE8E18	Solid And Hazardous Waste Management	0
131	VIII	171CE8E19	Air Pollution and Control	0
132	VIII	171CE8O01	OE Electronic Instrumentation	0
133	VIII	171CE8O02	Database Management Systems	0
134	VIII	171CE8O03	Alternative Energy Sources	0
135	VIII	171CE8O04	Waste Water Management	0
136	VIII	171CE8O05	Fundamentals of Liquefied Natural Gas	0
137	VIII	171CE8O06	Green Fuel Technologies	0
138	VIII	171CE8O07	Green Engineering Systems	0
139	VIII	171CE8P02	Major Project	0

Total number of courses in the academic year 2021-2022	= 139
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2021-2022	= 58
Percentage of syllabus revision carried out in the academic year 2021-2022 = $(58/139)*100$	= 41.72 %


Program Coordinator


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


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Department of Civil Engineering

Date: 20-04-2022

Minutes of the VIII meeting of BOS scheduled on 18-04-2022

The VIII meeting of the BOS of Civil Engineering was held virtually on 18-04-2022 by 10:00 AM via Microsoft teams. Mr. P.Ravi Kishore, Chairperson presided over the meeting.

Agenda 8.1: Welcome address by Chairperson

Mr. P. Ravi Kishore, Chairperson of BOS, invited all the distinguished members of BOS to the VIII BOS meeting.

Agenda 8.2: Ratification of minutes of the previous Board of Studies meeting.

- Discussed regarding the minutes of the previous board of studies meeting held on 07-10-2021 and the members have ratified the same.

Agenda 8.3: Discussion on proposed AR20 B.Tech (CE) Program – V, VI, VII & VIII semesters syllabus and ratification of the same.

The BOS members approved the V, VI, VII & VIII semesters syllabus of AR20 B.Tech, after suggesting the following changes–

- Structural Engineering track
Concrete Technology:
 - Suggested to include NDT and durability in the syllabus
 - Suggested to include Textbook by S. RamamruthamConstruction Technology and Management: Suggested to include pre-cast element
Construction Materials and Equipment: Suggested to include nano aggregates and Recycled Concrete Aggregate (RCA)
Basic Concrete Technology: Suggested to include anti-wash concrete
- Transportation Engineering track
Pavement Construction Maintenance and Management:
Suggested to include median of road
- Environmental Engineering track
 - Professional Electives:
PE 1 EPC: 1. Suggested to include acts related to environment
2. Suggested to prescribe an Indian author book
- Theory:
Environmental Engineering: Suggested to include IS 456- 2000 standards for quality of water for Constructional activities

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Agenda 8.4: Discussion on proposed syllabus for courses in V to VIII semester under AR20 Honors & Minor degree and ratification of the same.

- BOS Chairman explained the detailed programme structure of AR20 B.Tech (CE) Including Regular, Honours, Minor degree B.Tech Programmes

Agenda 8.5: Discussion on the value-added courses to be offered for the students and ratification of the same.

- BoS members approved the list of value-added courses offered to students.
- 6 Value added courses are discussed from various online platforms like Course Era, Land T EdTech and Udemy and finalized the same.

Agenda 8.6: Discussion on the courses having focus on Employability/entrepreneurship/skill development in the programs of AR19 B.Tech (CE) and M.Tech,(Structural Engineering) and ratification of the same.

- The members of BOS ratified the courses having focus on employability/entrepreneurship/skill development in the AR 19 B.Tech (CE) , and M.Tech (Structural Engineering) program.

Agenda 8.7: Discussion on the new courses offered in the B.Tech (CE) and M.Tech (Structural Engineering) programs and ratification of the same

- Members of BOS noted the new courses offered in the AR19 B.Tech (CE) and M.Tech (Structural Engineering) programs and ratified the same. The percentage of new courses introduced in the academic year 2021-22 for B.Tech (CE) is 14.43%. The list of new courses during the academic year 2021-2022 enclosed as Annexure-I.

Agenda 8.8: Discussion on the percentage of syllabus revision done in the B.Tech (CE) and M.Tech (Structural Engineering) programs and ratification of the same.

- The syllabus revision was done in B.Tech (CE) & M. Tech (Structural Engineering) program based on the stakeholder's feedback on Curriculum. The BoS members have approved and ratified all the syllabus revisions in B.Tech (CE)& M.Tech (Structural Engineering). The percentage of courses revised in this academic year 2021-22 for B.Tech (CE) is 41.72 % and M.Tech(Structural Engineering) is 3.03%.The list of courses revised is enclosed as Annexure-II.

Agenda 8.9: Discussion on the B.Tech (CE) and M.Tech (Structural Engineering) Programmes in which Choice Based Credit System (CBCS)/elective course system is being implemented and ratification of the same.

- Members of BOS ratified the Choice Based Credit System (CBCS)/elective course system that is being implemented in B.Tech (CE) and M.Tech (Structural Engineering) programs.

Agenda 8.10: Analysis of the feedback on curriculum from stakeholders

- The BOS Chairperson presented the analysis report of stakeholders' feedback on Curriculum. The BOS members noted the same and advised to incorporate the suggestions as per the feasibility. The Action Taken Report is enclosed as Annexure-III.


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Agenda 8.11: Analysis of Results of the odd semester of the academic year 2021-22.

- The BOS Chairperson presented the even and odd semesters pass percentage of the A.Y. 2021-2022. The BOS members noted the same.

Agenda 8.12: Analysis of student feedback in the odd semester of the academic year 2021-22.

- BOS Chairperson expressed that the student feedback & action taken report process was initiated at end of each semester. The BOS members noted the same.
- BoS members suggested to present the students results in grade wise and subject wise. And also, to present the number of students who cleared all the subjects at the first attempt.

Agenda 8.13: Any other item with the approval of Chairperson.


- Discussed about Industry 4.0 and identification of related courses
- Discussed about integrated lab and theory courses of which 30 to 40% are through online platform
- Ways to improve GATE rankers among students

Agenda 8.14: Scheduling of next Board of Studies meeting.

- The next BOS meeting is tentatively scheduled in the month of November 2022.

Agenda 8.15: Vote of Thanks.

- Vote of thanks was presented by Mr. P. Ravi Kishore BOS Chairperson.


BOS Chairperson
Head of the Department
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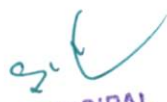
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Department of Civil Engineering

Annexure I

List of new courses in the academic year 2021-2022

S. No	Program	Semester	Course Code	Course Name
1.	B. Tech (CE)	V	191PR5P02	Socially Relevant Project
2.	B. Tech (CE)	III	201SC3L01	Computer Aided Drafting Lab
3.	B. Tech (CE)	IV	201SC4L13	3D Modeling using Revit
4.	B. Tech (CE)	V	191CE5E04	Subsurface Investigation and Instrumentation
5.	B. Tech (CE)	V	191CE5E01	Airport Planning and Design
6.	B. Tech (CE)	V	191CE5E03	Environmental Pollution and Control
7.	B. Tech (CE)	V	191CE5O01	Basic Concrete Technology
8.	B. Tech (CE)	VI	191CE6E09	Railway Engineering
9.	B. Tech (CE)	VI	191CE6E08	Hydropower Development
10.	B. Tech (CE)	VI	191CE6E12	Expansive Soils
11.	B. Tech (CE)	VI	191CE6E11	Docks and Harbour Engineering
12.	B. Tech (CE)	VI	191CE6E15	Water Resources System Analysis
13.	B. Tech (CE)	VI	191CE6E14	Industrial Waste & Waste-Water Engineering
14.	B. Tech (CE)	VI	191CE6O02	Disaster Management


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Department of Civil Engineering

Annexure II

List of courses revised in the academic year 2021-2022

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (CE)	V	191CE5T09	Irrigation & water resource Engineering
2	B. Tech (CE)	V	191CE5E02	Construction Technology & Management
3	M. Tech (Structural Engineering)	III	192ST3E15	Industrial Structures
4	M. Tech (Structural Engineering)	III	192ST1E04	Bridge Engineering


BOS Chairperson
Head of the Department
Dept. of Civil Engineering
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DEPARTMENT OF CIVIL ENGINEERING

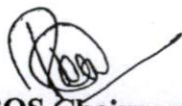
Annexure III

Action taken report on Stakeholders Feedback in the Academic Year 2021-2022

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1	8.6	Student's exposure to practice a land field knowledge.	Students has been taken to industrial visit to Yeleswaram dam and field trip on geology
		Conduct programming skills training for students to prepare them for interviews.	We have already implemented a training program.
		Trained the students in programming skills so that they can confidently face the technical interview.	We are providing training for placement jobs and will gradually increase training sessions.
2	8.4	Inclusion of minor degree sandhon our courses	For 3 rd and 4 th year B.Tech (AR20) students shall complete at least four subjects selected from four different specializations to get B.Tech Honors.
	8.13	It is preferable to offer GATE classes after college hours or during summer vacation.	The Civil Department is organizing GATE training for students who are eager to learn.
	8.5	Introduced software for steel structure design, such as TEKLA.	As per suggestions we will focus on software's which are related to steel structures.
3	8.5	Suggested to conduct on value-added course in odd semester and another value-added course in even semester.	In odd semester "Structural Design of RC Buildings Using Eas", In even semester "2D & 3D Modelling Using Google Sketch Up" along with academics conducted.
	8.13	The curriculum should be revised and follow the Engineering Service Examination and the GATE exam syllabus.	Step by step, we are upgrading the syllabus.
	8.6	organize a workshop to discuss ways to improve the teaching and learning process	Based on your suggestions, we will create workshop schedules.

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4	8.6	Improve communication skills & employability caliber in students	Conducting communications skills & budget tests under the guidance of Technical Hub of Aditya Educational Institutions, Surampalem with continuous monitoring.
	8.3	Students must receive advanced surveying training in order to increase practical knowledge and use the most up-to-date tools in the field of civil engineering.	Total station camp report submission was introduced in the third year of the B.Tech program as a means of improving students' practical knowledge approach to solving domain problems.
	8.3	Include all related basic engineering subjects in the first year and allow for branch change options in the second year.	We will consult with college administration based on the feedback we have received.


BOS Chairperson
 Head of the Department
 Dept. of Civil Engineering
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