



# ADITYA ENGINEERING COLLEGE

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

Program Name : M.Tech. in Computer Science and Engineering

Syllabus Revision for the Academic Year 2020-2021				
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	192CS1T01	Mathematical Foundations of Computer Science	0
2	I	192CS1T02	Advanced Data Structures & Algorithms	0
3	I	192CS1E01	Big Data Analytics	0
4	I	192CS1E02	Digital Image Processing	0
5	I	192CS1E03	Advanced Operating Systems	0
6	I	192CS1E04	Advanced Computer Networks	0
7	I	192CS1E05	Internet of Things	0
8	I	192CS1E06	Object Oriented Software Engineering	0
9	I	192HS1T01	Research Methodology and IPR	0
10	I	192CS1L01	Advanced Data Structures & Algorithms Lab	0
11	I	192CS1L02	Advanced Computing Lab	0
12	II	192CS2T03	Machine learning	0
13	II	192CS2T04	MEAN Stack Technologies	0
14	II	192CS2E07	Advanced Databases and Mining	0
15	II	192CS2E08	Ad Hoc & Sensor Networks	0
16	II	192CS2E09	Soft Computing	0
17	II	192CS2E10	Cloud Computing	0
18	II	192CS2E11	Principles of computer security	0
19	II	192CS2E12	High Performance Computing	0
20	II	192CS2L03	Machine Learning with Python lab	0
21	II	192CS2L04	MEAN Stack Technologies Lab	0
22	II	192CS2P01	Mini Project with Seminar	0

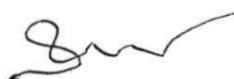
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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
23	I/II	192MC1A01/ 192MC2A01	English for Research Paper Writing	0
24	I/II	191MC2A02/ 192MC2A02	Disaster Management	0
25	I/II	192MC1A03/ 192MC2A03	Sanskrit for Technical Knowledge	0
26	I/II	192MC1A04/ 192MC2A04	Value Education	0
27	I/II	192MC1A05/ 192MC2A05	Constitution of India	0
28	I/II	192MC1A06/ 192MC2A06	Pedagogy Studies	0
29	I/II	192MC1A07/ 192MC2A07	Stress Management by Yoga	0
30	I/II	192MC1A08/ 192MC2A08	Personality Development through Life Enlightenment Skills	0
31	I/II	192MC1A09/ 192MC2A09	Soft Skills	0
32	III	192CS3P02	Dissertation-I/ Industrial Project	0
33	III	192CS3E13	Deep Learning	100
34	III	192CS3E14	Social Network Analysis	100
35	III	192ST3O01	Repair & Rehabilitation of Structures	100
36	III	192ST3O02	Green Building Systems	100
37	III	192ST3O03	Basic Concrete Technology	100
38	III	192ST3O04	Basic Foundation Engineering	100
39	III	192PD3O01	Renewable Energy Technologies	100
40	III	192PD3O02	Hybrid Electric Vehicles	100
41	III	192PD3O03	Energy Audit and conservation Management	100
42	III	192PD3O04	Neural Networks and Fuzzy Logic	100
43	III	192PD3O05	Industrial Safety	100
44	III	192PD3O06	Composite Materials	100
45	III	192TE3O01	Energy Systems	100
46	III	192TE3O02	Fuels and Combustion	100
47	III	192TE3O03	Green Engineering Technology	100
48	III	192TE3O04	IC Engines	100

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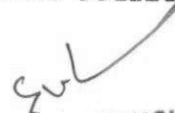
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
49	III	192TE3O05	Automotive Technology	100
50	III	192ES3O01	Embedded System Design	100
51	III	192ES3O02	Digital System Design	100
52	III	192ES3O03	Programming Languages for Embedded Systems	100
53	III	192ES3O04	Sensors & Actuators	100
54	III	192VD3O01	Physical Design Automation	100
55	III	192VD3O02	VLSI Technology	100
56	III	192VD3O03	Nano-electronics	100
57	III	192CS3O05	Artificial Intelligence	100
58	III	192CS3O06	Deep Learning	100
59	III	192PE3O01	Introduction to Petroleum Engineering	100
60	III	192PE3O02	Process Intensification	100
61	III	192PE3O03	Fundamentals of Liquefied Natural Gas	100
62	III	192PE3O04	Subsea Engineering	100
63	III	192PE3O05	Geology	100
64	III	192PE3O06	HSE in Petroleum Industry	100
65	IV	192CS4P03	Dissertation-II	0

Total number of courses in the academic year 2020-2021	= 65
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2020-2021	=32
Percentage of syllabus revision carried out in the academic year 2020-2021 = $(32/65)*100$	= 49.23%

  
Program Coordinator

  
Head of the Department

**Head of the Department**  
**Department of CSE**  
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## Department of Computer Science and Engineering

Date: 17-10-2020

### Minutes of the VI meeting of BOS scheduled on 15-10-2020

The VI meeting of the BOS of CSE was held virtually on 15<sup>th</sup> October 2020 at 11.00 AM through Microsoft Teams. Prof A. Vanathi, Chairperson presided over the meeting.

#### **Agenda 6.1: Welcome address by Chairperson**

Prof. A. Vanathi, BOS Chairperson invited the distinguished members of BOS to the VI BOS Meeting.

#### **Agenda 6.2: Ratification of minutes of the previous Board of Studies meeting**

The BOS members have ratified the points discussed in the previous Board of Studies meeting held on 08/11/2019.

#### **Agenda 6.3: Discussion and ratification of the Vision and Mission of the department and Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs) of the Programs under the Department.**

Members of BOS ratified the Vision and Mission of the department, PEOs, POs and PSOs of the Programs under the Department.

#### **Agenda 6.4: Discussion on proposed AR 19 B. Tech (CSE) program IV & V Semesters syllabus and ratification of the same.**

The members of BOS ratified the AR 19 IV&V Semesters B. Tech syllabus after incorporating the following changes:

- Suggested to prepare COs in all levels of Blooms Taxonomy covering entire syllabus for all the Courses.
- Suggested to remove second text book in the course "Formal Languages and Automata Theory".
- Suggested to involve the students in real-time applications using IOT.
- Suggested to include practical oriented books for lab courses.
- Suggested to check the continuity of the topic Optimal randomized algorithm in Unit III of the course "Design and Analysis of Algorithms"
- Suggested to include IIT Delhi and IIT Kharagpur experts NPTEL weblinks in the course "Design and Analysis of Algorithms".

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- Suggested to include Logic programming concepts as one unit in the course "Functional and Logic Programming".
- Suggested to add the web links of Pallab Das Guptha, subject expert from IIT Kharagpur in the course "Artificial Intelligence".

**Agenda 6.5: Discussion on proposed AR20 B. Tech (CSE) First Year Program structure and ratification of the same.**

The members of BOS ratified the AR20 B. Tech (CSE) First Year Program structure.

**Agenda 6.6: Discussion on proposed AR20 B. Tech (CSE) Program – I & II semesters syllabus and ratification of the same.**

The members of BOS ratified the AR20 B. Tech (CSE) Program – I & II semesters syllabus

**Agenda 6.7: Discussion on proposed AR 19 M. Tech (CSE) Program – III & IV semesters syllabus and ratification of the same.**

The members of BOS ratified the AR 19 M. Tech (CSE) Program – III & IV semesters syllabus.

**Agenda 6.8: Discussion on the courses having focus on employability/entrepreneurship/skill development in the programs of B. Tech (CSE) and M. Tech (CSE) and ratification of the same.**

The members of BOS ratified the courses having focus on employability/entrepreneurship/skill development in the B. Tech (CSE) and M. Tech (CSE) program.

**Agenda 6.9: Discussion on the new courses offered in the B. Tech (CSE) and M. Tech (CSE) programs and ratification of the same**

Members of BOS noted the new courses offered in the B. Tech (CSE) and M. Tech (CSE) programs and ratified the same. The percentage of new courses introduced during the academic year 2020-21 for B. Tech (CSE) is 16.16 % and M. Tech (CSE) is 6.15%. The list of new courses is enclosed as Annexure-I.

**Agenda 6. 10: Discussion on the B. Tech (CSE) and M. Tech (CSE) programs 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 (CSE) and M. Tech (CSE) programs.

**Agenda 6.11: Discussion on the value-added courses offered for students and ratification of the same.**

Members of BOS ratified the various value- added courses identified for the students to be offered and suggested to include topics related to thrust areas.



**Agenda 6.12: Discussion on the percentage of syllabus revision done in the B. Tech (CSE) and M. Tech (CSE) programs and ratification of the same.**

The syllabus revisions were done in B. Tech (CSE) and M. Tech (CSE) based on the stakeholders feedback on Curriculum. The BOS members have approved all the syllabus revisions in B. Tech (CSE) and M. Tech (CSE). The percentage of courses revised in this academic year 2020-21 for B. Tech (CSE) is 23.23 % and M. Tech (CSE) is 49.23 %. The list of courses revised is enclosed as Annexure-II.

**Agenda 6.13: Discussion on Analysis of Results**

The BOS Chairperson presented the odd and even semesters pass percentage for the A.Y.2019-2020. The BOS members noted the same.

**Agenda 6.14: Analysis of Students Feedback & Action Taken Report**

BOS Chairperson presented the student feedback percentage and action taken report. The BOS members noted the same.

**Agenda 6.15: Analysis of Stakeholder's Feedback on Curriculum**

The BOS Chairperson presented the analysis report of Stakeholder's 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.

**Agenda 6.16: Any other item with the approval of Chairman.**


- Suggested to follow the competitive exams pattern partially in preparation of the question paper for sessional examinations.
- Suggested to involve the alumni students to give guest lectures on few topics in the curriculum.
- Suggested to involve the students in smart city projects of Kakinada.

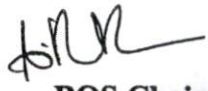
**Agenda 6.17: Scheduling of next Board of Studies meeting.**

The next BOS meeting is tentatively scheduled in the month of April 2021.

**Agenda 6.18: Vote of Thanks**

The Chairperson presented the Vote of Thanks.

  
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BOS Chairperson  
Head of the Department  
Department of CSE  
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## Department of Computer Science and Engineering

### Annexure-I

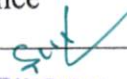
#### List of New Courses in the Academic Year 2020-21

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (CSE)	II	201ES2T07	Data Structures through C
2	B. Tech (CSE)	III	191CS3T02	Object Oriented Programming through Java
3	B. Tech (CSE)	III	191CS3T03	Advanced Data Structures
4	B. Tech (CSE)	III	191MC3A04	Essence of Indian Traditional Knowledge
5	B. Tech (CSE)	IV	191MC4A06	Biology for Engineers
6	B. Tech (CSE)	VII	171CS7E15	Image Processing
7	B. Tech (CSE)	VII	171CS7E16	Cyber Laws
8	B. Tech (CSE)	VII	171CS7E17	Middleware Technologies
9	B. Tech (CSE)	VII	171CS7E18	Artificial Intelligence and Machine Learning
10	B. Tech (CSE)	VIII	171CS8E21	Agile Methodologies
11	B. Tech (CSE)	VIII	171CS8E23	Distributed Databases
12	B. Tech (CSE)	VIII	171CS8O01	Microprocessor and Multi Core Systems
13	B. Tech (CSE)	VIII	171CS8O03	Soft Computing
14	B. Tech (CSE)	VIII	171CS8O05	Optical Communications
15	B. Tech (CSE)	VIII	171CS8O06	Renewable Energy sources
16	B. Tech (CSE)	VIII	171CS8O07	Nano Technology and its Applications
17	M. Tech (CSE)	III	192CS3E13	Deep Learning

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18	M. Tech (CSE)	III	192CS3E14	Social Network Analysis
19	M. Tech (CSE)	III	192ST3O01	Repair & Rehabilitation of Structures
20	M. Tech (CSE)	III	192ST3O02	Green Building Systems
21	M. Tech (CSE)	III	192ST3O03	Basic Concrete Technology
22	M. Tech (CSE)	III	192ST3O04	Basic Foundation Engineering
23	M. Tech (CSE)	III	192PD3O01	Renewable Energy Technologies
24	M. Tech (CSE)	III	192PD3O02	Hybrid Electric Vehicles
25	M. Tech (CSE)	III	192PD3O03	Energy Audit and conservation Management
26	M. Tech (CSE)	III	192PD3O04	Neural Networks and Fuzzy Logic
27	M. Tech (CSE)	III	192PD3O05	Industrial Safety
28	M. Tech (CSE)	III	192PD3O06	Composite Materials
29	M. Tech (CSE)	III	192TE3O01	Energy Systems
30	M. Tech (CSE)	III	192TE3O02	Fuels and Combustion
31	M. Tech (CSE)	III	192TE3O03	Green Engineering Technology
32	M. Tech (CSE)	III	192TE3O04	IC Engines
33	M. Tech (CSE)	III	192TE3O05	Automotive Technology
34	M. Tech (CSE)	III	192ES3O01	Embedded System Design
35	M. Tech (CSE)	III	192ES3O02	Digital System Design
36	M. Tech (CSE)	III	192ES3O03	Programming Languages for Embedded Systems
37	M. Tech (CSE)	III	192ES3O04	Sensors & Actuators
38	M. Tech (CSE)	III	192VD3O01	Physical Design Automation
39	M. Tech (CSE)	III	192VD3O02	VLSI Technology
40	M. Tech (CSE)	III	192VD3O03	Nano-electronics
41	M. Tech (CSE)	III	192CS3O05	Artificial Intelligence
42	M. Tech (CSE)	III	192CS3O06	Deep Learning

  
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43	M. Tech (CSE)	III	192PE3O01	Introduction to Petroleum Engineering
44	M. Tech (CSE)	III	192PE3O02	Process Intensification
45	M. Tech (CSE)	III	192PE3O03	Fundamentals of Liquefied Natural Gas
46	M. Tech (CSE)	III	192PE3O04	Subsea Engineering
47	M. Tech (CSE)	III	192PE3O05	Geology
48	M. Tech (CSE)	III	192PE3O06	HSE in Petroleum Industry



**BOS Chairperson**

*Head of the Department*

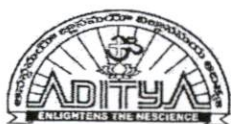
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## Department of Computer Science and Engineering

### Annexure-II

#### List of Courses Revised in the Academic Year 2020-21

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (CSE)	II	191BS3T14	Discrete Mathematics
2	B. Tech (CSE)	III	191CS3L02	Advanced Data Structures Lab
3	B. Tech (CSE)	III	191BS4T18	Probability and Statistics
4	B. Tech (CSE)	VII	171CS7E19	Information Retrieval Systems
5	B. Tech (CSE)	VIII	171CS8E24	Distributed Systems
6	B. Tech (CSE)	VIII	171CS8O02	Embedded Systems
7	B. Tech (CSE)	VIII	171CS8O04	Operations Research

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BOS Chairperson  
Head of the Department  
Department of CSE

ADITYA ENGINEERING COLLEGE (A)





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## Department of Computer Science and Engineering

### Annexure-III


### Action Taken Report on Stakeholders Feedback in the Academic Year 2020-21

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1	6.15	Increase internship opportunities to build practical work experience and improve coding skills	Students are made mandate for summer internship after the IV semester and VI semester. To improve the coding skills, courses like Python programming, Data Structures through C, Object Oriented Programming through C++ are included, Skill Oriented Courses like Applications of python-pandas and Web application development using full stack frontend development are introduced in AR 20.
		Include Emerging technologies in the syllabus	In the revised Syllabus, Open Elective I, II, III & IV are introduced and all the emerging technologies like AR/VR, RPA, ML, AI and so on are included in AR 20.
		Students need to be aware of ethics, our tradition and should work for societal benefits	Courses like Environmental Science, Constitution of India , Biology for Engineers, Essence of Indian Traditional Knowledge are included in AR 20 syllabus. Students are encouraged to do

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			project on societal issues.
2	6.15	Training Programs must be organized to improve skills for the students	It is decided to offer the enhanced technical courses like Full Stack Development, Problem Solving using Python, R Programming and its Applications as Value added courses to students.
		Focus more on practical aspects. Projects should be given more importance as evaluation component. Industrial experts must be invited to encouraged.	Courses like Engineering Exploration Project, Industry Oriented Minor Project and Socially relevant Project are included in the AR 20. Guest lectures are conducted with industrial experts.
		Students need to be aware of industry exposure	The Students are taken for nearby industries as Industrial visit. On regular basis Guest Lectures on recent trends by Industrial expert is arranged to the students.
3	6.15	Introduce Active Learning Strategy and awareness of Blooms in outcome-based education	Encouragement is provided to implement Active Learning Strategies to increases the understandability of the concept
		Students require communication skills and leadership qualities.	Courses like Communicative English , Communicative English Lab , Professional Communication Skills Lab are included in the AR20 curriculum. Projects and internships are done as a team works which help them to develop their team work and leadership qualities.
		Introduce courses related to requirement of new technologies in Industry	Courses like Programming for Problem Solving using C , Python Programming , Applications of python-numpy, Web application development using full stack frontend development, Applications of python-pandas ,


  
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			Web application development using full stack frontend development are introduced in AR 20 curriculum.
4	6.14	Suggested to increase the employability of every student.	AR 20 curriculum is designed with one skill oriented course in each and every semester which makes them more employable.
		Exposure to latest developments and advances should be known to the students	Experts were invited to share their knowledge to our faculty and students. This helped them to interact with the resource persons and was motivated to do higher studies and take up jobs which has challenging future ahead.
		Extracurricular and sport facilities are good but more sport amenities provided to the students	All required materials are purchased and they are made available to the students
5	6.15	Students and teaching faculties should be techno savvy and internet savvy.	Formal instructions were dispersed to competent authority for appropriate actions on the issues of effective use of ICT by teachers.
		Syllabus should be more practical based.	As per the new revised syllabus practical laboratory will be modified
		Need to Provide more focus on core fundamental concepts.	In the faculty meeting, is directed and discussed about improving fundamental concepts of students and also their participation in workshops/ conferences/ competitions
6	6.15	More emphasis should be on the applications of the opted field of study.	Inter-departmental and Inter-disciplinary projects were encouraged.
		Sophisticated analytical laboratory to be started	More number of laboratories are

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			established with best trainers.
7	6.15	Impact factor journals may be listed out.	List of Journals with impact factor was prepared by the experts.
		Commented favourable to revised necessary content of relevant courses offer good academic flexibility	Syllabus has been revised and skill-based electives core subject and audit course introduced
8	6.14	Applicability/relevance of curriculum in real life situations can be increased.	Teachers made efforts to relate the curriculum with real life situations.
		Some teachers are lagging in using modern teaching tools like PowerPoint Presentations, Video Lectures, Moodle etc.	Faculty members are instructed to use modern pedagogical tools like in teaching and required facilities are made.

  
**BOS Chairperson**  
*Head of the Department*  
**Department of CSE**  
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