

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### 7th BOARD OF STUDIES MEETING

# Minutes of Meeting ACADEMIC YEAR 2021-22

**DATE** 

08-05-2021

VENUE

Online via ZOOM

TIME

10.30 AM

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#### AGENDA FOR THE MEETING

- 1. Welcome address by the chairman of BOS
- 2. Presentation by chairman of BOS about department achievements
- 3. Presentation of proceedings of the previous BOS meeting by chairman of BOS
- 4. Proposed course details of UG for the academic year 2021-22
- 5. Presentation of draft of scheme & syllabus of final year Computer Science and Engineering subjects of 2018-2022 batch for ratification.
- 6. Recommendations/ suggestions of BOS members.
- 7. Implementation of recommendation of BOS members
- 8. Approval of scheme & syllabus of final year Computer Science and Engineering subjects for 2018-2022 batch
- 9. Approval of modifications in syllabus of two courses of sixth semester Computer Science and Engineering of 2019-2023 batch
- 10. Proposed course details of PG for the academic year 2021-22
- 11. Presentation of draft of scheme & syllabus of interdisciplinary elective courses for third semester MTech Computer Science and Engineering of 2020-2022 batch for ratification
- 12. Approval of scheme & syllabus for third semester MTech Computer Science and Engineering subjects of 2020-2022 batch
- 13. Recommendation and approval of syllabus of the course Blockchain Technology to be introduced as specialisation elective for MTech 4<sup>th</sup> semester of 2020-22 batch
- 14. Vote of thanks by the chairman of BOS

### **LIST OF MEMBERS**

Sl. No	Category	Nomination of the committee	Name of the person	Email ID & Mobile No
1	Head of the Department	Chairperson	Dr. B Rajalakshmi	hod_cse@newhorizonindia.edu 9841711347
			M	ember
		1	Dr. Amarjeet Singh	amarjeetsingh.iaf@gmail.com 9315432675
	Faculty member at	2	Dr. Pamela Vinitha	dr.pamelave@newhorizonindia.edu 9663371149
2	different level with	3	Dr. Clara Kanmani A	<u>claraka@newhorizonindia.edu</u> 9986058272
	specialization	4	Dr. Thirukkumaran R	dr.thirukkumaranr@newhorizonindia.edu 9789697169
		5	Dr. Sridevi S	dr.sridevis@newhorizonindia.edu 7502348695
<b>)</b> —		6	Dr. Jaya R	jayar@newhorizonindia.edu 9632011983
	*			mber
3	Subject expert from outside the college	1	Dr. T. K. Sateesh Chairman, DSUniversity - Bengaluru	chairman-ct@dsu.edu.in 9845129890
3	nominated by Academic Council	2	Dr. Mallikarjuna M Deputy Director, SCIT, REVA University- Bengaluru	Mmkodabagi@gmail.com Ph: 7022244613
	Experts from outside			mber
4	the college nominated by Vice Chancellor	1	<b>Dr. Thippeswamy</b> Professor, Dept. of CSE BMSITM - Bengaluru	gt_swamy@bmsit.in 9448864856
	Representative from			mber
5	Industry / Corporate sector / allied area related to	1	Mr. Ritwik Batabyal Global Delivery Head, L&T Technology Service	<u>ritwik.batabyal@gmail.com</u> 7019985731
	placements, nominated by Academic Council	2	Mr. Venkatesh Software Development Manager, Amazon India Ltd	venkateshchannal@gmail.com 9448182790
)				mber
6	Post Graduate meritorious alumni nominated by Principal	1	Ms. Archana Udayashankar Business Systems Analyst VMware - Bengaluru	udayashankararchana@gmail.com 8197999685
Tall and				nber
7		1	Mr. Siva Balan N	sivabn@newhorizonindia.edu 9886368137
		2	Ms. Soja Rani S	sojars@newhorizonindia.edu 9482598037
i di	Co-opted members	3	Ms. Deepti Rai	deeptiraj@newhorizonindia.edu 9880649211
		. 4	Ms. Uma N	numa@newhorizonindia.edu 9986905934 palcementofficer@newhorizonindia.edu
		5	Mr. Binod Singh	9663928931

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### **LIST OF MEMBERS PRESENT**

Sl. No	Category	Nomination of the committee	Name of the person	Signature
1	Head of the Department	Chairperson	Dr. B Rajalakshmi	BB. Noy. 2021
		1 - 1 - 1	Mei	mber
		1	Dr. Amarjeet Singh	2
	Faculty member at different level with	2	Dr. Pamela Vinitha	Rame
2	different	3	Dr. Clara Kanmani A	dets
	specialization	4	Dr. Thirukkumaran R	100c
		5	Dr. Sridevi S	5.50
		6	Dr. Jaya R	RILL
		21 21		mber
3	Subject expert from outside the college nominated	1	<b>Dr. T. K. Sateesh</b> Chairman, DSUniversity - Bengaluru	Unavailable due to Official Work
	by Academic Council	2	Dr. Mallikarjuna M Deputy Director, SCIT, REVA University- Bengaluru	Emergency
	Experts from			nber
4	outside the college nominated by Vice Chancellor	1	Dr. Thippeswamy Professor, Dept. of CSE BMSITM - Bengaluru	- Colon
	Representative			mber
5	from Industry / Corporate sector / allied area related	1	Mr. Ritwik Batabyal Global Delivery Head, L&T Technology Service	Refroik Bataleyal
	to placements, nominated by Academic Council	2	Mr. Venkatesh Software Development Manager, Amazon India Ltd	Unavailable due to Official Work
	Post Graduate		Mei	mber
6	meritorious alumni nominated by Principal	1	Ms. Archana Udayashankar Business Systems Analyst VMware - Bengaluru	Laz
				mber
		1	Mr. Siva Balan N	
7	Colombia	2	Ms. Soja Rani S	la l
1	Co-opted members	3	Ms. Deepti Rai	A
		4	Ms. Uma N	45

### Welcome Address by the Chairman of BOS

The 7<sup>th</sup> Board of Studies meeting for Department of Computer Science and Engineering was scheduled on 8<sup>th</sup> of May'2021 at 10.30 AM. Due to the prevailing Covid-19 conditions, the BOS meeting was conducted online using ZOOM.

At the outset, Chairperson **DR. B. Rajalakshmi** – Professor & Head – Department of Computer Science and Engineering, welcomed all the members to the 7<sup>th</sup> Board of Studies meeting.

The Chairperson introduced **Dr. Amarjeet Singh**, Prof & Dean-Academics, New Horizon College of Engineering to the members of Board of Studies and welcomed him for the ensuing proceedings.

The Chairperson further expressed special thanks to **Dr. Thippeswamy**, an expert, nominated by VTU. The chairperson also expressed her gratitude to industrial nominee by Academic Council, **Mr. Ritwik Batabyal**, Global Delivery Head, L&T Technology Service, for sparing the time from his busy schedule to attend the meeting.

The meeting was also attended by meritorious alumnus Ms. Archana Udayashankar, Business Systems Analyst, VMware – Bengaluru, nominated by the Principal, Co-opted members Mr. Siva Balan N, Ms. Soja Rani S, Ms. Deepti Rai, Ms. Uma N and internal faculty members Dr. Pamela Vinitha, Dr. Clara Kanmani A, Dr. Thirukkumaran R, Dr. Sridevi S and Dr. Jaya R with different specialization.

# Presentation by chairman of BOS about department achievements

Chairperson of BOS DR. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, presented the achievements of the department in the current academic year 2020-21.

### AGENDA -3

# Presentation of proceedings of the previous BOS meeting by chairman of BOS

Chairperson of BOS DR. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, briefed the proceedings of previous BOS meeting acknowledging their contribution for betterment in framing the scheme & syllabus.

### AGENDA -4

# Proposed course details of UG for the academic year 2021-22

### I/II Semester (2021 Scheme - 160 Credits)

Sl.		A	Cre	dits di	stribu	tion	18-1 0 2-1	Ma	rks	Remark
No	Course Code	Course Name	L	T	P	S	Total Credits	CIE	SEE	(LAB/ Hands on Programs)
1	21CSE13/23	Problem Solving Using Python	3	0	0	0	3	50	50	Theory
2	21CSL18/28	Problem Solving Using Python Lab	0	0	2	0	2	50	50	Lab
		Total Cre	edits				5			

# III Semester (2018 Scheme - 175 Credits)

	viár -			Cre	dit D	istribu	ution	Overall	Ma	rks		Remarks
SI. No	Course Code	Course	BOS				,	Credits	CIE	SEE	Total	(LAB/ Hands on Programs)
				L	Т	P	S					
1	20CSE31A	Applied Mathematics-III	BS	2	1	0	0	3	50	50	100	Theory
2	19HSS322	Life skills for Engineers	HSS	3	0	0 ,	0	3	50	50	100	Theory
3	19HSS323	Environmental Science and Awareness	HSS	Ma	ndat	ory C	ourse	0	25	25	50	Theory
4	19CSE33	Digital Electronics	CSE	3	0	0	0	3	50	50	100	Theory
5	19CSE34	Data Structures using C	CSE	3	0	0	0	3	50	50	100	Theory
6	19CSE35	UNIX System Programming	CSE	3	0	0	0	3	50	50	100	Theory
7	19CSL36	Digital Electronics Lab	CSE	0	0	2	0	2	25	25	50	Lab
8	19CSL37	Data Structures using C Lab	CSE	0	0	2	0	2	25	25	50	Lab
9	19CSL38	UNIX System Programming Lab	CSE	0	0	2	0	2	25	25	50	Lab
10	19CSE39	Mini Project in C	CSE	1 112 1	-	2	0	2	25	25	50	Experiential Learning
	18HSS171	Essential English	HSS	М	anda	tory C	ourse	0	25	25	50	Theory
11	20DMAT31A	Basic Applied Mathematics-I	BS	M	anda	tory C	ourse	0	25	25	50	Theory
	Canal C	Total	P		ser i			23	350	350	700	

### IV Semester (2018 Scheme - 175 Credits)

S. No	Course Code	Course	BOS	Cre	dit Di	stribut	ion	Overall Credits		Mark	s	Remarks
- 1				. L	T	Р	S		CIE	SEE	TOTAL	(LAB/ Hands on Programs)
1	20CSE41A	Discrete Mathematics and Graph Theory	BS	2	1	0	0	3	50	50	100	Theory
2	20HSS421	Economics For Engineers	HSS	2	0	0	0	2	25	25	50	Theory
3	20HSS424/ 20HSS425	Aadalitha Kannada/ Vyavaharika Kannada	HSS	1	0	0	0	1	25	25	50	Theory
4	19CSE43	Object Oriented Programming with Java	CSE	3	1	0	0	4	50	50	100	Theory
5	19CSE44	ARM Processor	CSE	3	0	0	0	3	50	50	100	Theory
6	19CSE45	Computer Organization	CSE	4	0	0	0	4	50	50	100	Theory
7	19CSL46	Object Oriented Programming with Java Lab	CSE	0	0	2	0	2	25	25	50	Lab
8	19CSL47	ARM Processor Lab	CSE	0	0	2	0	2	25	25	50	Lab
9	19CSE48	Mini Project in Java	CSE	-	-	2	0	2	25	25	50	Experientia Learning
10	18HSS272	Constitution of India and Professional Ethics	HSS	М	andat	ory Coi	urse	0	25	25	50	Theory
11	20DMAT41A	Basic Applied Mathematics-II	BS	М	andat	ory Co	urse	0	25	25	50	Theory
-		Total						23	325	325	650	

### V Semester (2018 Scheme - 175 Credits)

SI.	Course			Cre	dit D	istribu	ution	Overall		Marks		Remarks
No	Code	Course	BOS	L	T	P	S	Credits	CIE	SEE	Total	(LAB/ Hands on Programs)
1	20CSE51	Analysis and Design of Algorithms	CSE	3	0	0	0	3	50	50	100	Theory
2	20CSE52	Operating System	CSE	3	0	0	0	3	50	50	100	Theory
3	20CSE53	Database Management System	CSE	3	0	0	0	3	50	50	100	Theory
4	20CSE54	Finite Automata and Compiler Design	CSE	3	0	0	0	3	50	50	100	Theory
5	20CSE55x	Professional Elective-I	CSE	3	0	0	0	3	50	50	100	Theory
6	20CSL56	Python Programming Lab	CSE	0	0	2	0	2	25	25	50	Lab
7	20CSL57	Analysis and Design of Algorithms Lab	CSE	0	0	2	0	2	25	25	50	Lab
8	20CSL58	Database Management System Lab	CSE	0	0	2	0	2	25	25	50	Lab
9	20CSE59	Mini Project using Python	CSE	* <u>1</u>	-	2	0	2	25	25	50	Experientia Learning
		TOTAL	E 7.				-,1	23	350	350	700	

S. NO	COURSE CODE	PROFESSIONAL ELECTIVE-I
1	20CSE551	Parallel Processing
2	20CSE552	Advanced Data Structures
3	20CSE553	Digital Image and Video Processing
4	20CSE554	Computational Intelligence

### VI Semester (2018 Scheme - 175 Credits)

	Course	e Deservice	plant.	Cre	dit D	istrib	ution	Overall		Mark	S	Remarks
S. No	Course Code	Course	BOS	L	т	Р	S	Credits	CIE	SEE	Total	(LAB/ Hands on Programs)
1	20CSE61	Web Frameworks and Technologies	CSE	3	0	0	0	3	50	50	100	Theory
2	20CSE62	Computer Networks	CSE	3	0	0	0	3	50	50	100	Theory
3	20CSE63	Data Mining and Machine Learning	CSE	3	0	0	0	3	50	50	100	Theory
4	20CSE64x	Professional Elective-II	CSE	3	0	0	0	3	50	50	100	Theory
5	20CSE65x	Professional Elective-III	CSE	3	0	0	0	3	50	50	100	Theory
6	20NHOPxx	Open Elective-I	t	3	0	0	0	3	50	50	100	Hands on Program
7	20CSL66	Web Frameworks and Technologies Lab	CSE	0	0	1.5	0	1.5	25	25	50	LAB
8	20CSL67	Computer Networks Lab	CSE	0	0	1.5	0	1.5	25	25	50	LAB
9	20CSE68	Mini Project in Web Frame Works or Operating System	CSE	_	_	2	0	2	25	25	50	Experienti al Learning
		TOTAL				1	-	23	375	375	750	

Profes	sional Elective - II	Professional Elective - III						
Course Code	Course	Course Code	Course					
20CSE641	Social Network Analysis	20CSE651	Semantic Web					
20CSE642	Soft Computing	20CSE652	Web of Things					
20CSE643	Agile Methodologies	20CSE653	Quantum Cryptography					
20CSE644	Cloud Computing	20CSE654	Software Agents					
		20CSE655	Advanced Java					

S.	Course				Cr Distr	edit ibuti	on	Overall		Mark	5	Remarks
O	Code	Course	BOS	L	Т	Р	S	Credits	CIE	SEE	Total	(LAB/ Hands on Programs)
1	20CSE71A	Software Testing	CSE	3	0	0	0	3	50	50	100	Theory
2	20CSE72A	Mobile Application Development	CSE	3	0	0	0	3	50	50	100	Theory
3	20CSE73XA	Professional Elective-IV	CSE	3	0	0	0	3	50	50	100	Theory
4	20CSE74XA	Professional Elective-V	CSE	3	0	0	0	3	50	50	100	Theory
5	20NHOPxx	Open Elective -II	1	3	0	0	0	3	50	50	100	Hands on Program
6	20CSL75A	Software Testing Lab	CSE	0	0	2	0	2	25	25	50	Lab
7	20CSL76A	Mobile Application Development Lab	CSE	0	0	2	0	2	25	25	50	Lab
8	20CSE77A	Mini Project in Mobile Application Development	CSE	-	-	2	0	2	25	25	50	Experien tial Learning
9	20CSE78A	Project Phase-	CSE	-	-	2	0	2	25	25	50	Experien tial Learning
		TOTAL						23	350	350	700	

PROI	ESSIONAL ELECTIVE-IV	PROF	ESSIONAL ELECTIVE-V
COURSE CODE	COURSE NAME	COURSE CODE	COURSE NAME
20CSE731A	Fundamentals of Data Science	20CSE741A	Natural Language Processing
20CSE732A	Artificial Intelligence	20CSE742A	Deep Learning
20CSE733A	Cyber Security, Forensics and Law	20CSE743A	Robotics
20CSE734A	Internet of Things	20CSE744A	Computer Vision
20CSE735A	Embedded Systems	20CSE745A	Service Oriented Architecture

## <u>VIII Semester (2018 Scheme - 175 Credits)</u>

	s.	Cannan	4	- 146	Cr	edit I	Distrib	ution	2-14/ 2-1 -25 g	Marks			Remarks
	No	Course Code	Course	BOS	L	T	P	S	Overall Credits	CIE	SEE	Total	(LAB/ Hands on Programs)
	1	20CSE81xA	Professional Elective-VI	CSE	3	0	0	0	3	50	50	100	Theory
	2	20CSE82xA	Professional Elective-VII	CSE	3	0	0	0	3	50	50	100	Theory
ALE STATES	3	20CSE83A	Internship Viva	CSE	-	ı	4	0	4	50	50	100	Experient ial Learning
A SHOULD SHOULD BE	4	20CSE84A	Project Phase-II	CSE	-	-	10	0	10	100	100	200	Experient ial Learning
STATE OF	D.		TOTAL						20	250	250	500	

PRO	FESSIONAL ELECTIVE-VI	PROFE	PROFESSIONAL ELECTIVE-VII		
COURSE CODE	COURSE NAME	COURSE CODE	COURSE NAME		
20CSE811A	Pattern Recognition	20CSE821A	Ethical Hacking & Prevention		
20CSE812A	Advanced Databases	20CSE822A	Green Computing		
20CSE813A	Mobile Computing	20CSE823A	Data Compression		
20CSE814A	Multi-core Architecture	20CSE824A	Cognitive and Learning Science		

# Presentation of draft of scheme & syllabus of final year Computer Science and Engineering subjects of 2018-2022 batch for ratification

- ✓ The Chairperson presented the draft of scheme and Contents of syllabus in each subject
  for seventh and eighth semester for scrutiny. The details were scrutinized by the
  members of the Board.
- Seventh semester Computer Science and Engineering Subjects:-

SL NO	SUBJECT CODE	SUBJECT
1	20CSE71A	Software Testing
2	20CSE72A	Mobile Application Development
3	20CSE73XA	Professional Elective-IV
• 100 <b>A</b> 100 0	20CSE731A	Fundamentals of Data Science
В	20CSE732A	Artificial Intelligence
С	20CSE733A	Cyber Security, Forensics and Law
D	20CSE734A	Internet of Things
Е	20CSE735A	Embedded Systems
4	20CSE74XA	Professional Elective-V
Α	20CSE741A	Natural Language Processing
В	20CSE742A	Deep Learning
С	20CSE743A	Robotics
D	20CSE744A	Computer Vision
Е	20CSE745A	Service Oriented Architecture
5	20NHOPxx	Open Elective -II
Α	20NHOP01	Big Data Analytics using HP Vertica-I
В	20NHOP02	VM Ware Virtualization Essentials-I
С	20NHOP04	Big Data Analytics using HP Vertica-I
D	20NHOP05	VM Ware Virtualization Essentials-II
Е	20NHOP07	SAP

F	20NHOP08	Schneider-Industrial Automation
G	20NHOP09	Cisco-Routing and Switching-I
Н	20NHOP10	Data Analytics
I	20NHOP11	Machine learning
J	20NHOP12	CISCO-Routing and switching -II
K	20NHOP13	IIOT Embedded Systems
L	20NHOP14	Block chain
M	20NHOP15	Product Life Cycle Management
N	20NHOP17A	Network Security & Cryptography
0	20NHOP18A	Physical Design
р	20NHOP19A	AI Data Analysis with Python
6	20CSL75A	Software Testing Lab
7	20CSL76A	Mobile Application Development Lab
8	20CSE77A	Mini Project in Mobile Application Development
9	20CSE78A	Project Phase-I

### Eighth Semester Computer Science and Engineering Subjects:-

SL NO	SUBJECT CODE	SUBJECT		
1 20CSE81xA		Professional Elective-VI		
A 20CSE811A		Pattern Recognition		
B 20CSE812A Advanced Databases		Advanced Databases		
		Mobile Computing		
		Multi-core Architecture		
2	20CSE82xA	Professional Elective-VII		
Α	20CSE821A	Ethical Hacking & Prevention		
В	20CSE822A	Green Computing		
С	20CSE823A	Data Compression		
D	20CSE824A	Cognitive and Learning Science		
3	20CSE83A	Internship Viva		
4	20CSE84A	Project Phase II		

## Recommendations/ Suggestions of BOS Members

- ✓ Board members appreciated the incorporation of advanced courses as electives in the UG curriculum.
- ✓ Board members suggested to try and include connectedness in the syllabus of related courses like Service Oriented Architecture, Artificial Intelligence, Internet of Things and Embedded Systems.
- ✓ Board members suggested to use recent editions of text books and reference books mentioned in syllabus.
- ✓ Board members suggested to include courses like Computational Biology, ERP in the UG curriculum.
- ✓ Board members suggested to incorporate hands on training in the elective courses offered for PG as this would ensure a thorough understanding of the concepts covered.
- ✓ Board members suggested to incorporate NEP into the curriculum. In this regard the course code of 7<sup>th</sup> and 8<sup>th</sup> semester of 2018-22 batch was changed to 20CSE71A, 20CSE72A and so on. Also the course code of open electives incorporated into the syllabus in the academic year 2017-18 as NHOPxx will henceforth be 20NHOPxx.
- Stakeholder feedback was discussed and incorporated into the curriculum.

### Implementation of Recommendation of BOS Members

The chairperson constituted the following groups to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs

	Sl No	Course	Course Name	Faculty	Action to be	
		Code	1-9		Taken	
100 E 100 E	1.	20CSE735A	Embedded Systems	Dr. Thirukkumaran R Ms. Shanmuga Priya S Mr. Santosh Kumar B	Try and include connectedness	
	2.	20CSE745A	Service Oriented	Mr. Santosh Kumar B Ms. Subhashree Rath	among these courses	
			Architecture			
	3.	20CSE554	Computational	Dr. Jaya R	Try and include	
			Intelligence	Dr.Vaishali M Deshmukh Ms. Pramilarani K	connectedness among these	
	4.	20CSE642	Soft Computing	Ms. Alpha Vijayan	courses	
	5.	20CSE732A	Artificial Intelligence			
	6.	20CSE53	Database Management System	Dr.Senthil Kumar R Ms. Uma N Ms. Tinu N S	Try and include connectedness among these	
	7.	20CSE812A	Advanced Databases		courses	
T	8.	20CSE63	Data Mining and	Dr.S J Subhashini	Try and include	
		1.129	Machine Learning	Mr. Siva Balan N Ms. Soja Rani S	connectedness among these	
r	9.	20CSE731A	Fundamentals of Data		courses	
			Science			
	10.	20CSE733A	Cyber Security,	Dr.Anidha Arulanandham	Try and include	
		ZUCSE/SSA	Forensics and Law	Ms. Suganya.R Ms. Chempavathy	connectedness among these	
-	11.	Ethical Hacking &		, , , , , , , , , , , , , , , , , , , ,	courses	
		20CSE821A	Prevention		30.	

A FRANCE	2 og 100			
12.	20CSE551	Parallel Processing		
13.	20CSE554	Computational Intelligence	en est tropic better to the	
14.	2.7.1	Data Mining and	And the Continue of the	
	20CSE63	Machine Learning	Dr. Pamela Vinitha Eric	
15.	20CSE641	Social Network Analysis	Dr. Rachana P	
16.	20CSE643	Agile Methodologies	Dr.S Nagendra Prabhu	Introduce recent editions of text
17.	20CSE644	Cloud Computing	Dr. A Suresh	books and reference books
18.	20CSE651	Semantic Web	Ms. Asha Rani Borah	in syllabus
19.	20CSE653	Quantum Cryptography	Mr. Manjunatha Swamy C	2
20.	20CSE71A	Software Testing	Mr.Dinesh G	7 1074 T
21.	20CSE72A	Mobile Application Development	Ms. Yogitha	
22.	20CSE741A	Natural Language Processing	Mr. Bhaskar S V	
23.	20CSE743A	Robotics	Ms. Lakshmi S Hanne	
24.	20CSE744A	Computer Vision		133 V.
25.	20CSE745A	Service Oriented Architecture		ng mga Tagawa
26.	20CSE813A	Mobile Computing		12.73
27.	20CSE814A	Multi-core Architecture		
		L	L	

# Approval of scheme & syllabus of final year Computer Science and Engineering subjects for 2018-2022 batch

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation.

### Seventh Semester Computer Science And Engineering Subjects:-

SL NO	SUBJECT CODE	SUBJECT	% Addition/ Deletioni n Modules	Proposed Experiential Learning in the Modules	Industrial inputs in the Modules	Percentage change in the syllabus for(AY 2020-2021 to AY 2021-22)
1.	20CSE71A	Software Testing	10%	Separate lab component included	Inclusion of recent Automation Tools	10%
2.	20CSE72A	Mobile Application Development	10%	Separate lab component included	Demo using various simulators.	10%
		20	CSE73XA P	rofessional Elective-IV		
3.	20CSE731A	Fundamentals of Data Science	50%	Hands on session	Demonstration with Jupyter tool	50%
4.	20CSE732A	Artificial Intelligence	20%	Study of real time Al applications	Concepts of Game Playing	20%
5.	20CSE734A	Internet of Things	20%	Hands on session with raspberry PI kit.	Demonstration of various sensors	20%
6.	20CSE735A	Embedded Systems	100%	Case Studies	Analysis of various microcontrollers	100%
***************************************		20	CSE74XA Pi	ofessional Elective-V		
7.	20CSE741A	Natural Language Processing	100%	Study of NLP applications	Working and applications of Sentiment analysis	100%

8.	20CSE742A	Deep Learning	100%	Case studies	Significance of Auto encoders	100%
9.	20CSE743A	Robotics	100%	Study on Robot drive systems and end effectors	Inclusion of Robot programming	100%
10	20CSE744A	Computer Vision	100%	Review of image processing techniques	Importance of Motion detection in real time scenarios	100%
11	20CSE745A	Service Oriented Architecture	100%	Case studies on REST and RESTful service	Deployment using JAX	100%
12	20CSL75A	Software Testing Lab	0%	Demostration of various testing tools	Included Selenium automation tool	0%
13	20CSL76A	Mobile Application Development Lab	0%	Developing android applications for various systems	Integrating databases and location based services	0%
14	20CSE77A	Mini Project in Mobile Application Development	NA	Individual mini projects are to be carried out	Rubrics are mentioned.	NA
15	20CSE78A	Project Phase-	NA	The entire work has to be carried out by the batch (Max.4 members) of students.	Rubrics are mentioned.	NA

### **Eighth Semester Computer Science And Engineering Subjects:**

SL NO	SUBJECT CODE	SUBJECT	% Additions / Deletions in Modules	Proposed Experiential Learning in the Modules	Industrial inputs in the Modules	Percentage change in the syllabus for (AY 2020-2021 to AY 2021-22)
	*	20CS	E81XA Profe	ssional Elective-VI		
1	20CSE811A	Pattern Recognition	100%	Case study on areas where Pattern recoginition used.	Analysis of usage of linear an non linear classifiers	100%

2	20CSE812A	Advanced Databases	100%	Hands on various indexing operations	Inclusions of recent applications of Databases	100%
3	20CSE813A	Mobile Computing	100%	Study on generations of telecommunication systems	Inclusion of various mobile platforms and its application	100%
4	20CSE814A	Multi-core Architecture	100%	Case study on serial processors and programming for parallel processors	Included Programs using OpenMP and MPI	100%
	. 11	20CS	E82XA Profes	ssional Elective-VII		
5	20CSE821A	Ethical Hacking & Prevention	100%	Review on different hacking techniques for real time scenarios.	Included recent attacks	100%
6	20CSE822A	Green Computing	100%	Study on various key sustainability and green IT trends.	Included Role of IT in green computing	100%
7	20CSE823A	Data Compression	100%	Case studies on various types of compression techniques	Included Video compression techniques	100%
8	20CSE824A	Cognitive and Learning Science	100%	Review study on the advanced memory models in the field of cognitive science	Included role of robots in intelligent agents.	100%

# Approval of modifications in syllabus of two courses of sixth semester Computer Science and Engineering of 2019-2023 batch

SL NO	SUBJECT CODE	SUBJECT	% Additions / Deletions in Modules	Proposed Experiential Learning in the Modules	Industrial inputs in the Modules	Percentage change in the syllabus for (AY 2020-2021 to AY 2021-22)
1.	20CSE63	DMML	30%	Experiments in ML introduced as	Included more ML concepts	30%
2.	20CSE642	Soft Computing	60%	value added Case studies	Included more advanced topics	60%

### AGENDA -10

# Proposed course details Of PG for the academic year 2021-22 FIRST SEMESTER (2021-2023) – 88 Credits

S. No	Course code	Course	BOS	Credit distribution			Overall credits	Marks		Remark
	ADVANCED		L	T	P		CIE	SEE	(LAB/ Hands on	
1	19SCS11	ADVANCED OPERATING SYSTEMS	CSE	3	0	0	3	50	50	Programs) Theory
2	19SCS12	ARTIFICIAL INTELLIGENCE	CSE	3	0	0	3	50	50	Theory
3	19SCS13	ADVANCED COMPUTER NETWORKS&SECUR ITY	CSE	3	0	0	3	50	50	Theory
4	19SCS14x	SPECIALIZATION ELECTIVE-1	CSE	4	0	0	4	50	50	Theory

5	19SCS15	HUMAN COMPUTER INTERACTION	CSE	3	0	0	3	50	50	Theory
6	19SCS16	RESEARCH METHODOLOGY & IPR	CSE	2	0	0	2	25	25	Theory
7	19SCS17	MINI PROJECT IN ACN	CSE				2	25	25	Experienti al Learning
8	19SCL18	ADVANCED OPERATING SYSTEMS LAB	CSE	0	0	2	2	25	25	Lab
		Total				F . a	22			

Specialization Elective-I					
Course code	Course				
19SCS141	OBJECT ORIENTED SOFTWARE ENGINEERING				
19SCS142	MULTI CORE ARCHITECTURE AND PROGRAMMING				
19SCS143	DATAWAREHOUSING AND DATAMINING				
19SCS144	PATTERN RECOGNITION AND IMAGE PROCESSING				

### SECOND SEMESTER (2021-2023) - 88 Credits

S. N	Course	Course	BOS	Cred	lit ribut	ion	Overall credits	Contact Hours	М	arks	Remark
0				L	Т	P			CIE	SEE	(LAB/ Hands on Programs
1	19SCS21	ADVANCED ALGORITHMS	CSE	3	0	0	3	3	50	50	Theory
2	19SCS22	CLOUD COMPUTING	CSE	3	0	0	3	3	50	50	Theory
3	19SCS23	BIG DATA ANALYTICS	CSE	4	0	0	4	4	50	50	Theory
4	19SCS24x	SPECIALIZATIO N ELECTIVE-2	CSE	4	0	0	4	4	50	50	Theory
5	19SCS25	MACHINE LEARNING	CSE	4	0	0	4	4	50	50	Theory
6	19SCS26	MINI PROJECT ON CLOUD COMPUTING	CSE				2	4	25	25	Experien tial Learning
7	19SCL27	ADVANCED ALGORITHMS LAB	CSE	0	0	2	2	4	25	25	LAB
	\$ 10 s	Total		17		15 THE S.	22				

	Specialization Elective-2					
Course code	Course					
19SCS241	SOFTWARE TESTING AUTOMATION					
19SCS242	MIDDLEWARE TECHNOLOGIES IN WEB AND MOBILE DOMAIN					
19SCS243	SERVICE ORIENTED ARCHITECTURE					
19SCS244	PARALLEL ALGORITHMS					

**THIRD SEMESTER (2020-2022) – 88 Credits** 

S.	Course			JIL	11/2	020-	2022 - 8	se crean	<u> </u>		
No	code	Course	BOS	OS Credit distribution		Overall credits	Contact Hours	Mark	s	Remark	
-		T		L	Т	P			CIE	SEE	(LAB/ Hands on Programs)
1	20SCS31x	Interdisciplinary Elective	CSE	4	0	0	4	4	50	50	Theory
2	20SCS32	INTERNSHIP	CSE	-		-	2	-	25	25	Experiential Learning
3	20SCS33	SEMINAR	CSE	-	-	-	2		25	25	Experiential
4	20SCS34	PROJECT PHASE-1	CSE	-	-	-	14	-	100	100	Learning Experiential Learning
Tot	aı						22				

Ţ	INTERDISCIPLINARY ELECTIVE						
COURSE CODE	COURSE						
200CS315							
20SCS316	INDUSTRIAL IOT						
	DIGITAL IMAGE AND VIDEO PROCESSING						
20SCS317	GAMING AND VIRTUAL REALITY						
20SCS318	ROBOTICS AND AUTOMATION						
20SCS319	BIO COMPUTATION / BIOINFORMATICS						
	- FILL STATE OF THE PROPERTY O						

# FOURTH SEMESTER (2020-2022) – 88 Credits

S. No	Course code	course	BOS		Credit distributio n		Overall credits	Contact Hours	Marks		Remarks	
	2000044	2072		L	Т	P		S 1 40 32	CIE	SEE	(LAB/ Hands on	
1	20SCS41 x	SPECIALIZATIO N ELECTIVE -4	CSE	4	0	0	4	4	50	50	Programs) Theory	
2	20SCS42	INTERNSHIP	CSE	-	-	÷ 7	2	-	25	25	Experiential	
3	20SCS43	SEMINAR	CSE	-		-	2		25	25	Learning Experiential	
4	20SCS44	PROJECT PHASE-2	CSE	-	-		14	-	10	10	Learning Experiential	
Av		Total		7		-	22		0	0	Learning	

f 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Specialization Elective -4						
Course code course							
20SCS411	AGILE TECHNOLOGIES						
20SCS412	WEB INTELLIGENCE						
20SCS413	ADVANCES IN COMPUTATIONAL SECURITY						
20SCS414	HIGH PERFORMANCE COMPUTING						
20SCS415	BLOCKCHAIN TECHNOLOGY						

# Presentation of draft of scheme & syllabus of interdisciplinary elective courses for third semester MTech Computer Science and Engineering of 2020-2022 batch for ratification

✓ The Chairperson presented the draft of scheme and Contents of syllabus in each course
of third semester for scrutiny. The details were scrutinized by the members of the Board.

SL NO	COURSE CODE	COURSE NAME
1.	20SCS31x	Interdisciplinary Elective
2.	20SCS315	INDUSTRIAL IOT
3.	20SCS316	DIGITAL IMAGE AND VIDEO PROCESSING
4.	20SCS317	GAMING AND VIRTUAL REALITY
5.	20SCS318	ROBOTICS AND AUTOMATION
6.	20SCS319	BIO COMPUTATION / BIOINFORMATICS
7.	20SCS32	INTERNSHIP
8.	20SCS33	SEMINAR
9.	20SCS34	PROJECT PHASE-1

#### AGENDA -12

# Approval of scheme & syllabus for third semester MTech Computer Science and Engineering subjects of 2020-2022 batch

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately.

Finally, the members approved the draft of the same with the modifications for final implementation.

SL NO	SUBJECT CODE	SUBJECT	% Additions / Deletions In Modules	Proposed Experiential Learning in the Modules	Industrial Inputs in the Modules	Percentage change in the syllabus for (AY 2020-2021 to AY 2021-22)
		20SCS31x I	nterdiscipli	nary Elective		
1.	200CS315	Industrial IoT	100%	Case Study	Included security in HOT systems	100%
2.	20SCS316	Digital Image And Video Processing	100%	Case Study	Included recent techniques in compressing digital image	100%
3.	20SCS317	Gaming And Virtual Reality	100%	Case Study	Included the concept of player centric game	100%
4.	20SCS318	Robotics And Automation	100%	Case Study	Included screen recorder an web recorder with database automation	100%
5.	20SCS319	Bio Computation / Bioinformatics	100%	Case Study	Included swarm intelligence algorithms	100%
6.	20SCS32	Internship	NA	Individual Work	Rubrics have to be mentioned.	NA
7.	20SCS33	Seminar	NA	Individual Work	Rubrics have to be mentioned.	NA
8.	20SCS34	Project Phase-1	NA	The entire work has to be carried out by the batch (Max.4 members) of students.	Rubrics have to be mentioned.	NA

### AGENDA -13

# Recommendation and approval of syllabus of the course Blockchain Technology to be introduced as specialisation elective for MTech 4<sup>th</sup> semester of 2020-22 batch

SL NO	COURSE CODE	COURSE NAME
1.	20SCS41x	SPECIALIZATION ELECTIVE -4
2.	20SCS411	AGILE TECHNOLOGIES
3.	20SCS412	WEB INTELLIGENCE
4.	20SCS413	ADVANCES IN COMPUTATIONAL SECURITY
5.	20SCS414	HIGH PERFORMANCE COMPUTING
6.	20SCS415	BLOCKCHAIN TECHNOLOGY
7.	20SCS42	INTERNSHIP
8.	20SCS43	SEMINAR
9.	20SCS44	PROJECT PHASE-2

### **Vote Of Thanks By The Chairman Of BOS**

The chairman of BOS thanked the external members for their fruitful participation on behalf of the Principal and the Management. He also thanked Dr. Amarjeet Singh, Prof & Dean – Academic and all the other members of the BOS for their active participation.

Dr. B Rajalakshmi

Chairman

**Board of Studies** 

Department of Computer Science and Engineering



Accredited by NAAC with 'A' Grade, Accredited by NBA

## Department of Computer Science & Engineering

**Board of Studies Academic Year: 2021-22** 

Date of BOS conducted: 08.05.2021

Annexure-I

### Percentage of Syllabus Change Recommended & Approved

**UG Program: BE** 

Year	Semester	Current Subject Code (Before BOS)	Proposed Subject Code (After BOS)	Percentage change of syllabus for (AY 2020-2021 to AY 2021-22)	Remarks if any
I	I & II	19CSE13/23	21CSE13/23	100%	Python Programming Introduced for NEP
II	III & IV		No Chang	e	
	V		No Chang	e	
III	VI	20CSE63	20CSE63	30%	DMML - Included more ML concepts
		20CSE642	20CSE642	60%	20CSE642- Soft Computing  Syllabus revised to avoid  similarity to 20CSE554-  Computational Intelligence
		xxCSE71	20CSE71A	100%	Course framed for 175 credits
		xxCSE72	20CSE72A	100%	Course framed for 175 credits
		xxCSE731	20CSE731A	100%	PE* Course framed for 175 credits
		xxCSE732	20CSE732A	100%	PE* Course framed for 175 credits
IV	VII	xxCSE734	20CSE734A	100%	PE* Course framed for 175 credits

	xxCSE735	20CSE735A	100%	New PE* Course Introduced for 175 credits
			100%	New PE* Course Introduced for
in (4 %).	xxCSE741	20CSE741A		New PE* Course Introduced for
	xxCSE742	20CSE742A	100%	New PE* Course Infloder
	XXCSE742	200327 (2.1	100%	New PE* Course Introduced for
	xxCSE743	20CSE743A	10070	175 credits
			100%	New PE* Course Introduced for
	xxCSE744	20CSE744A		New PE* Course Introduced for
	xxCSE745	20CSE745A	100%	175 credits
	XXC3L743	2000	100%	New PE* Course Introduced for
	xxCSE811	20CSE811A	· · · · · · · · · · · · · · · · · · ·	175 credits
	xxCSE812	20CSE812A	100%	New PE* Course Introduced for 175 credits
	XXCSE012	20002	100%	New PE* Course Introduced for
VIII	xxCSE813	20CSE813A	10070	175 credits
		#4/7.8 is to	100%	New PE* Course Introduced for
	xxCSE814	20CSE814A		175 credits
	xxCSE821	20CSE821A	100%	New PE* Course Introduced for 175 credits
			100%	New PE* Course Introduced for
	xxCSE822	20CSE822A		175 credits
	xxCSE823	20CSE823A	100%	New PE* Course Introduced fo
	7,7,0020	***	100%	New PE* Course Introduced for
	xxCSE824	20CSE824A		175 credits

# Percentage of Syllabus Change Recommended & Approved

PG Program: MTech

Semester	Current Subject	Proposed Subject	Percentage change of	Remarks if any
	Code (Before	Code (After BOS)	syllabus for	
	BOS)		(AY 2020-2021 to AY	
			2021-22)	
I & II			No Change	
	19SCS311	20SCS315	100%	New Interdisciplinary
				Elective Introduced
	19SCS312	20SCS316	100%	New Interdisciplinary
III				Elective Introduced
111	19SCS313	20SCS317	100%	New Interdisciplinary
				Elective Introduced
	19SCS314	20SCS318	100%	New Interdisciplinary
				Elective Introduced
		20SCS319	100%	New Interdisciplinary
	xxx			Elective Introduced
IV	xxx	20SCS415	100%	New Professional Elective
				Introduced

BOS-Chairman
Dated Dated: 13. may. 2021

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### Department of Computer Science & Engineering

**Board of Studies Academic Year: 2021-22** 

Date of BOS conducted: 08.05.2021

### Annexure-II

#### **BOS: Minutes of Meeting Report**

Topic: Subject/name and code whose syllabus has not been changed in BOS meeting (unchanged subject).

**UG Program: BE** 

Year	Semester	Current Subject Code (Before BOS)	Current Subject Name (Before BOS)	Justification for not Changing
		19HSS322	Life skills for Engineers	Basic Fundamental Subject
		19HSS323	Environmental Science and Awareness	Basic Fundamental Subject
		19CSE34	Data Structures using C	Basic Fundamental Subject
II	III	19CSE35	UNIX System Programming	Basic Fundamental Subject
		19CSL36	Digital Electronics Lab	Basic Fundamental Subject
		19CSL37	Data Structures using C Lab	Basic Fundamental Subject
		19CSL38	UNIX System Programming Lab	Basic Fundamental Subject

		19CSE39	Mini Project in C	Basic Fundamental Subject
		20CSE41A	Discrete Mathematics and Graph Theory	Basic Fundamental Subject
		20HSS421A	Economics For Engineers	Basic Fundamental Subject
		20HSS424/ 20HSS425	Aadalitha Kannada/ Vyavaharika Kannada	Basic Fundamental Subject
		19CSE43	Object Oriented Programming with Java	Basic Fundamental Subject
	IV	19CSE44	ARM Processor	Basic Fundamental Subject
		19CSE45	Computer Organization	Basic Fundamental Subject
		19CSL46	Object Oriented Programming with Java Lab	Basic Fundamental Subject
		19CSL47	ARM Processor Lab	Basic Fundamental Subject
		19CSE48	Mini Project in Java	Basic Fundamental Subject
		20CSE51	Analysis and Design of Algorithms	Basic Fundamental Subject
		20CSE52 Operating System		Basic Fundamental Subject
		20CSE53	Database Management System	Basic Fundamental Subject
111	v	20CSE54	Finite Automata and Compiler Design	Basic Fundamental Subject
		2.5.1984	20CSE55x Professional Elec	tive-l
		20CSE55	Parallel Processing	Discussed in BOS 2020-2

	Advanced Data Structures	Discussed in BOS 2020-21
20CSE552		
20CSE553	Digital Image and Video Processing	Discussed in BOS 2020-21
20CSE554	Computational Intelligence	Discussed in BOS 2020-21
20CSL56	Python Programming Lab	Basic Fundamental Subject
20CSL57	Analysis and Design of Algorithms Lab	Basic Fundamental Subject
20CSL58	Database Management System Lab	Basic Fundamental Subject
20CSE59	Mini Project using Python	Basic Fundamental Subject
20CSE61	Web Frameworks and Technologies	Discussed in BOS 2020-21
20CSE62	Computer Networks	Basic Fundamental Subject
20CSE63	Data Mining and Machine Learning	Discussed in BOS 2020-21
	20CSE64x Professional Elect	tive-II
20CSE641	Social Network Analysis	Discussed in BOS 2020-21
20CSE642	Soft Computing	Discussed in BOS 2020-21
20CSE643	Agile Methodologies	Discussed in BOS 2020-21
20CSE644	Cloud Computing	Discussed in BOS 2020-21
	20CSE553  20CSE554  20CSL56  20CSL57  20CSE59  20CSE61  20CSE62  20CSE63  20CSE641  20CSE641	20CSE552 Digital Image and Video Processing  Computational Intelligence  20CSE554  Computational Intelligence  20CSL56 Python Programming Lab  20CSL57 Analysis and Design of Algorithms Lab  20CSL58 Database Management System Lab  20CSE59 Mini Project using Python  20CSE61 Web Frameworks and Technologies  20CSE62 Computer Networks  20CSE63 Data Mining and Machine Learning  20CSE64x Professional Elections  20CSE641 Social Network Analysis  20CSE642 Soft Computing  20CSE643 Agile Methodologies

20CSE651	Semantic Web	Discussed in BOS 2020-21
20CSE652	Web of Things	Discussed in BOS 2020-21
20CSE653	Quantum Cryptography	Discussed in BOS 2020-21
20CSE654	Software Agents	Discussed in BOS 2020-21
20CSE655	Advanced Java	Discussed in BOS 2020-21
20CSL66	Web Frameworks and Technologies Lab	Discussed in BOS 2020-21
20CSL67	Computer Networks Lab	Basic Fundamental Subject
20CSE68	Mini Project in Web Frame Works or Operating System	Discussed in BOS 2020-21

BOS-Chairman

Dated: 13. may. 2021

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(Subject Syllabus /Code Unchanged)



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# Department of Computer Science & Engineering

Board of Studies Academic Year: 2021-22

Date of BOS conducted: 08.05.2021

Annexure-III

### Topic: Proposed subject name and new subject code (After BOS) whose subject topics changed

Year	Semester	Proposed Subject Name	Proposed Subject Code	Module No	List of Subject Topics Changed	%of change of syllabus
ı	1/11	Problem Solving	21CSE13/23	Module-1		
		Using Python		Module-2	All concepts of Python introduced	100%
				Module-3		
				Module-4		
		Module-5				
		- 23		Module-1	Fr Sign	
				Module-2		
		Software Testing	20CSE71A	Module-3	No Change	0%
				Module-4		
				Module-5		
				Module-1		2
				Module-2		
		Mobile Application	20CSE72A	Module-3	No Change	0%
		Development		Module-4		
				Module-5		
			20CSE73	BXA Profess	ional Elective-IV	

IV		*	1	Module-1		
				Module-2	Tableau	
		Fundamentals of	F	Madula 2	Linear	<b>7</b> 00/
	VII	Data Science	20CSE731A	Module-4	Advanced	50%
	V 11				Algorithms	
	S.F.			Module-5		
			7 2 2 844	Module-1		
				Module-2	-	
		Artificial	20CSE732A	Module-3	No Change	0%
		Intelligence	20CSE732A	Module-4		
				Module-5		
				Module-1		
				Module-2		
		Cyber Security,	20CSE733A	Module-3	-	0%
		Forensics and			No Change	0,70
		Law		Module-4		
				Module-5		
				Module-1		
-				Module-2		
		Internet of	20CSE734A	Module-3	No Change	0%
		Things		Module-4		
				Module-5		
			de Se Nova	Module-1		
		-		Module-2	New Course	
		Embedded	20CSE735A	Module-3	introduced in 2021- 22 as per BOS	100%
		Systems	20C3E733A	Module-4	recommendation in	10070
				Module-5	2020-21	
			20CSE74xA	PROFESSIO	NAL ELECTIVE-V	
				Module-1	Newly introduced	100%
			20CSE741A	Module-2	Newly introduced course	
1				345		

			14.1.1.2	A Company of the comp	12 470 1
	Natural		Module-3		
	Language		Module-4		
	Processing		Module-5		
			Module-1	Newly	100%
			Module-2	introduced course	
	Deep Learning	20CSE742A	Module-3		
			Module-4		
1.11	the state of the s	lynneitre	Module-5		
			Module-1	Newly	100%
		*	Module-2	introduced course	
	Robotics	20CSE743A	Module-3		
	Robotics	2000	Module-4		
	4 1 4 5	HARCHAN	Module-5		
	2 A2 C 2014 C 146 M 1		Module-1	Newly introduced	100%
1 1		-	Module-2	course	
	Computer Vision	20CSE744A	Module-3		
	Compace		Module-4		
		1	Module-5		
	1 V + 1100		Module-1	Newly introduced	100%
	Section (Section 1989)		Module-2	course	
	Service Oriented	20CSE745A	Module-3		
	Architecture		Module-4		
			Module-5		
		20CSE81	A Professio	nal Elective-VI	
	( Laprice III is		Module-1	Newly introduced	100%
			Module-2	course	
	Pattern	20CSE811A	Module-3		
	Recognition		Module-4		
	Text print the	1	Module-5		

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			Module-1	Nowly				
				Newly introduced course	100%			
-51	Advanced		Module-2	course				
	Databases	20CSE812A	Module-3					
			Module-4					
	13,1-1118		Module-5					
			Module-1	Newly introduced	100%			
VIII	Mobile		Module-2	course				
V-111	Computing	20CSE813A	Module-3					
		1297-11	Module-4					
			Module-5					
			Module-1	Newly introduced	100%			
	Multi-core Architecture		Module-2	course				
		20CSE814A	Module-3					
			Module-4					
			Module-5					
	20CSE82xA Professional Elective-VII							
		20CSE821A	Module-1	Newly introduced course	100%			
			Module-2					
	Ethical Hacking & Prevention		Module-3					
	d revention		Module-4					
			Module-5					
			Module-1	Newly introduced	100%			
			Module-2	- course				
	Green Computing	20CSE822A	Module-3					
	Company		Module-4					
			11-11	-				
			Module-5					
			Module-3	Newly introduced	100%			
	Data	20CSE823A	7 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	Newly introduced course	100%			
	Data Compression	20CSE823A	Module-1		100%			

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			Module-4		
			Module-5		
			Module-1	Newly introduced	100%
ì		15	Module-2	course	
2	Cognitive and	20CSE824A	Module-3		
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Learning Science		Module-4		
			Module-5		

BOS-Chairman 13. way. 221

Dated: 13. may 2021

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