




EXCEL ENGINEERING COLLEGE (Autonomous)

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KOMARAPALAYAM - 637303

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1	1.1.2 Number of Programs where syllabus revision was carried out (Photo and Document)	1. Minutes of Academic Council or BOS Meeting 2. Syllabus revision Copy with Authorized Signature
2	1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Photo and Document)	1. Minutes of Academic Council/BOS Meeting 2. Syllabus Copy with Authorized Signature
3	1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum (Document)	1. Syllabus Copy relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics Course Objective for the above subjects


HOD
DEPARTMENT OF CSE
Excel Engineering College
Komarapalayam - 637 303.



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INFORMATION AND COMMUNICATION ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
BOARD OF STUDIES MEETING HELD ON 30.06.2021
(TIME: 10.30 AM to 12.30 PM)

Screenshot



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INFORMATION AND COMMUNICATION ENGINEERING DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING


BOARD OF STUDIES MEETING HELD ON 30.06.2021

(TIME: 10.30 AM to 12.30 PM)

BOARD MEMBERS

1	University Representative	Dr.Santhi Baskaran, Professor and Head, Department of Information Technology, Pondicherry Engineering College, Puducherry- 605014.
2	Subject Experts	1. Dr.R.Sasikala, Professor & Head, School of Computing Science and Engineering VIT University, Vellore - 632014. E-Mail : sasikarthi@gmail.com Phone No: 9942045230
		2. Dr.K.Annapurani, Associate Professor, Department of Computer Science and Engineering, SRM Institute of Science and Technology, Kattankulathur-603203 E-Mail : annapook@srmist.edu.in Phone No: 9444088915
3	Industry Expert	Mr.Sarath Chandran, General Manager HR, Vaken Technologies (P) Ltd., Phone: 9952943404 sararth.c@vaken.io, sarath.prisar@gmail.com
3	Industry Nominee	1.Mr.Girish Madhavan , CEO, Quadsel Systems Pvt Ltd., N0.1, Lake Area 1 st main Road, Nungambakkam, Chennai-600034
		2.Mr.Vijay Karunakaran, Founder & CEO, TNQ Ingage Technologies, No 9, 2 nd Floor, Sambantham Gardens, Velachery, Chennai-600042 Email:vijay@tnqingage.com Phone:9840834132
		3.Mr Ramesh Banu , Head of Analytics Information & Management Aspire Systems, Siruseri, Chennai - 603 103 Email: ramesh.greatlakes@gmail.com Phone: 9940 511 176

4	One UG alumnus	Mr. D.C. Karthick Kumar , System Engineer, Tata Consultancy Services Chennai-97 E-Mail: dckarthickcse@gmail.com Phone: 7373257526
5	One postgraduate alumnus	Mr C.Vijayakumar Project manager, Reliance Vision Express Pvt Ltd, Bangalore - 560052 E-Mail: vijay308it@gmail.com Phone: 9487929439
6	Current UG students	Mr.Abdul Rhaman IV YR Mr.S.Rubigasri III YR
7	All Faculty Members	


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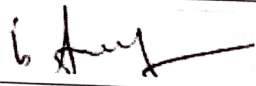
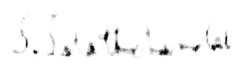
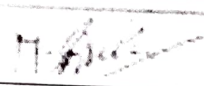
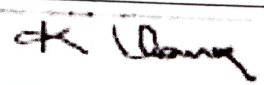
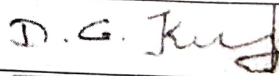


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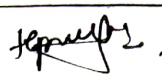

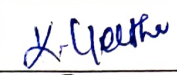

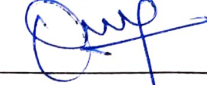
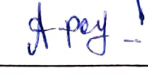
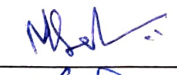

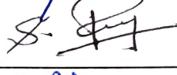

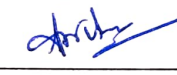
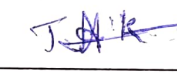

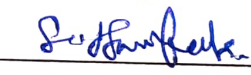


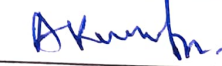
INFORMATION AND COMMUNICATION ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOARD OF STUDIES MEETING HELD ON 30.06.2021
(TIME: 10.30 AM to 12.30 PM)


Members Present:

S.No	Name of the Member	Designation	Present/Absent	Digital Signature
1	Dr.K.Bommanna Raja	Principal	Present	
2	Dr .T.Ravichandran	Chairman	Present	
3	Dr Santhi Baskaran	University Nominee	Present	
4	Dr R Sasikala	Subject Expert	Present	
5	Dr K Annapurani	Subject expert	Present	
6	Mr S Sarath Chandra	Industry representative	Present	
7	Mr Girish Madhavan	Special Invitee	Present	
8	Mr Vijay Karunakaran	Special Invitee	Present	
9	Mr Ramesh Babu	Special invitee	Absent	—
10	Mr. D.C. Karthick Kumar	UG Alumni	Present	
11	Mr C.Vijayakumar	PG Alumni	Present	
12	Dr R Nallusamy	Director Admin	Present	

13	Dr.C.Karthikeyini	IQAC Head	Present	
14	Dr L Ashok Kumar	COE	Present	
15	Dr.K.Geetha	Faculty members	Present	
16	Dr.S.Sreethar		Present	
17	Mr.M.Vadivel		Present	
18	Mr.A.Periyasamy		Present	
19	Mr.M.Sathishkumar		Present	
20	Mr.A.Sureshkumar		Present	
21	Mr.S.Praveen Kumar		Present	
22	Mr.P.Mohanraj		Present	
23	Mr.K.G.Arun Kumar		Present	
24	Mr.T.Arun Kumar		Present	
25	Mrs.P.Kumari		Absent	-
26	Mrs.V.Ramya		Present	
27	Mrs.S.Sasikala		Present	
28	Mr.E.Deepan Kumar		Present	
29	Ms.R.Rubiga Sri	II Year Student	Present	
30	Mr.Abdul Rhaman	III Year Student	Present	


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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING SECOND BOARD OF STUDIES

MINUTES OF MEETING

Meeting No : EEC/CSE/BoS/2
Date : 30.06.2021
Time : 10.30 A.M
Venue : Online Mode (Via Zoommeeting)
Link

[https://us02web.zoom.us/j/8848481566?pwd=ckZYRWl0SVF5VnIwYTBseU5Wck5L](https://us02web.zoom.us/j/8848481566?pwd=ckZYRWl0SVF5VnIwYTBseU5Wck5LQT09ID)

QT09ID

Meeting Id : 884 848 1566
Pass code : excel@123

Agenda:

1. To discuss and pass the syllabi of the courses of II year B.E. Computer Science and Engineering Programme for the students admitted from 2020-21 academic year onwards
2. To discuss and pass the syllabi of the courses of III and IV semesters of M.E. Computer Science and Engineering Programme for the students admitted from 2020-21 academic year onwards
3. To discuss and pass the Syllabi of subjects offered to other departments
4. To discuss and pass the Syllabi of subjects for Ph.D Course work.
5. To discuss and pass the Syllabi of subjects for one Credit Course.
6. Any other Matters.

Resolutions

1. Resolved that the following recommendations for the syllabi of B.E. Computer Science and Engineering programme with the following changes.

Semester- III

RECOMMENDATION	RESOLUTION
20PCS301- DESIGN AND ANALYSIS OF ALGORITHMS	
B.CS.1.1 Expert members suggested to have text book with recent edition for the all courses.	B.CS.R.1.1 Latest edition of text books for all courses are included as per suggestion.
20CS302-OBJECT ORIENTED PROGRAMMING	
B.CS.1.2 Dr.R.Sasikala suggested that for second year student, it is not necessary to have CO1 and CO2 is at Apply level. CO1, CO2, CO3 may be at lower level for second year student.	B.CS.R.1.2 The course outcomes changes done as per recommendation.
B.CS.1.3 Also suggested to swap Unit III and IV.	B.CS.R.1.3 Unit III and IV swapped as per the suggestion.
20CS303 - COMPUTER ARCHITECTURE AND ORGANIZATION	
B.CS.1.4 Dr.R.Sasikala suggested to swap Unit IV and V.	B.CS.R.1.4 Unit IV and V swapped as per the suggestion.
20CS304-OPERATING SYSTEMS	
B.CS.1.5 Dr.ShanthiBaskaran recommended to modify CO3 since the syllabus is having only Basics of OS ,not having the Distributed OS.	B.CS.R.1.5 Course Outcome 3 modified as per the suggestion.
B.CS.1.6 Dr.Shanthi Baskaran also suggest to change the unit IV topic.	B.CS.R.1.6 Unit IV Topic changed as per the suggestion.
20CS305- OBJECT ORIENTED PROGRAMMING LABORATORY	
B.CS.1.7 Dr.R.Sasikala suggested to change the order of experiments which should be synchronized with Syllabus so that students can able do the experiments easily.	B.CS.R.1.7 Changed the order of experiments which should be synchronized with syllabus as per recommendation.

Semester- IV

RECOMMENDATION	RESOLUTION
20CS401-FORMAL LANGUAGE AND AUTOMATA THEORY	
B.CS.1.8 Dr.ShanthiBaskaran asked to check the title of the course, It should be "Formal Languages and Automata Theory".	B.CS.R.1.8 Checked and changed the title" Formal Languages and Automata Theory" as per the suggestion.
20CS402- SOFTWARE ENGINEERING	
B.CS.1.9 Dr.Annapoorani suggested to swap unit III and IV and also asked to check CO-PO mapping.	B.CS.R.1.9 Swapped the Unit IV and Unit III and checked the Mapping of Course outcomes with Programme outcomes is reduced for ease of calculating the course attainment as per recommendation.
20CS404- DATABASE MANAGEMENT SYSTEMS	
B.CS.1.10 Dr.R.Sasikala recommended to include NOSQL in the syllabus.	B.CS.R.1.10 Included SQL topic in the syllabus as per the recommendation.
B.CS.1.11 Dr.T.Senthil Kumar suggest to include PL-SQL in the syllabus so the student can work with Triggers	B.CS.R.1.11 Included PL-SQL topic in the syllabus as per the recommendation.
20CS406- DATA COMMUNICATION AND COMPUTER NETWORKS LABORATORY	
B.CS.1.12 Dr.R.Sasikala suggested to change the order of experiments which should be synchronized with Syllabus so that students can able do the experiments easily	B.CS.R.1.12 Changed the order of experiments which should be synchronized with syllabus as per recommendation.

ME Computer Science and Engineering

3. Resolved that the following recommendations and syllabi of M.E.Computer Science and Engineering programme with the following changes.

RECOMMENDATION	RESOLUTION
M.CS.1.1 Expert Members suggested that for PG students it's enough to include Reference book with Recent Edition.	M.CS.R.1.1 Included the Reference book with Recent Edition for all PG courses as per the suggestion.
Data Visualization Techniques	

M.CS.1.2 Dr.T.Senthil Kumar suggested to remove unit V and recommended to split the other four units to five units.	M.CS.R.1.2 Removed Unit V and Splited other four units into five units as per the suggestion.
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4.Resolved that the curriculum and syllabus for III &IV be followed as per the existing regulation


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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B E Computer Science and Engineering

REGULATION 2020

I to VIII Semesters Curriculum

I – SEMESTER										
Code No.	Course	Category	Periods /Week			C	Maximum Marks			
			L	T	P		CA	FE	Total	
Theory Course(s)										
20MA103	Mathematics – I for Computer Sciences	BS	3	2	0	4	40	60	100	
20CS101	Computer Hardware and Networking	ES	3	0	0	3	40	60	100	
Theory with Practical Courses										
20ENEXX	Language Elective – I*	HSS	2	0	2	3	50	50	100	
20PH101	Physics for Computer Sciences	BS	3	0	2	4	50	50	100	
20CS102	Problem Solving using Python	ES	3	0	2	4	50	50	100	
Practical Course										
20CS103	Computer Practices Laboratory	ES	0	0	2	1	50	50	100	
Mandatory Course										
20MC101	Induction Programme	MC	2 Weeks			0	100	-	100	
TOTAL			14	2	8	19	380	320	700	

Language Electives – I									
Code No.	Course	Category	Periods /Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20ENE01	Communicative English	HSS	2	0	2	3	50	50	100
20ENE02	Advanced Communicative English	HSS	2	0	2	3	50	50	100

Passed in Board of studies Meeting on 30.06.2021

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II SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20MA203	Mathematics – II for Computing Sciences	BS	3	2	0	4	40	60	100
20CS202	Programming and Data Structures	PC	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20ENEXX	Language Elective – II*	HSS	2	0	2	3	50	50	100
20CH201	Chemistry for Computing Sciences	BS	3	0	2	4	50	50	100
20ME203	Engineering Graphics	ES	1	0	4	3	50	50	100
Practical Course(s)									
20CS203	Programming and Data Structures Laboratory	PC	0	0	4	2	50	50	100
Mandatory Course									
20MC202	Interpersonal Skills	MC	0	0	2	0	100	-	100
TOTAL			12	2	14	19	380	320	700

*Language Electives – II									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20ENE02	Advanced Communicative English	HSS	2	0	2	3	50	50	100
20ENE03	Hindi	HSS	2	0	2	3	50	50	100
20ENE04	French	HSS	2	0	2	3	50	50	100
20ENE05	German	HSS	2	0	2	3	50	50	100

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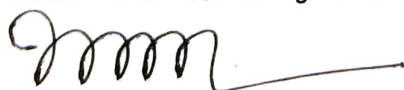
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B.E. Computer Science and Engineering (R-2020)									
III SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20MA303	Discrete Mathematics and Graph Theory	BS	3	2	0	4	40	60	100
20CS301	Design and Analysis of Algorithms	PC	3	0	0	3	40	60	100
20CS302	Object Oriented Programming	PC	3	0	0	3	40	60	100
20CS303	Computer Architecture and Organization	ES	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20EC306	Digital Logics and Microprocessor	ES	3	0	2	4	50	50	100
20CS304	Operating Systems	PC	3	0	2	4	50	50	100
Practical Course(s)									
20CS305	Object Oriented Programming Laboratory	PC	0	0	4	2	50	50	100
Mandatory Course									
20MC301	Environmental Sciences	MC	2	0	0	0	100	-	100
TOTAL			20	2	8	23	410	390	800

IV SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20MA403	Probability and Statistical Methods	BS	3	2	0	4	40	60	100
20CS401	Formal Language and Automata Theory	PC	3	0	0	3	40	60	100
20CS402	Software Engineering	PC	3	0	0	3	40	60	100
20CS403	Data Communication and Computer Networks	ES	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20CS404	Database Management Systems	PC	3	0	2	4	50	50	100
20CS405	Computer Graphics and Multimedia	PC	3	0	2	4	50	50	100
Practical Course(s)									
20CS406	Data Communication and Computer Networks Laboratory	ES	0	0	4	2	50	50	100
Mandatory Course									
20MC401	Soft Skills	MC	2	0	0	0	100	-	100
TOTAL			20	2	8	23	410	390	800

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V SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20CS501	Foundations of Artificial Intelligence	PC	3	0	0	3	40	60	100
20CS502	Compiler Design	PC	3	0	0	3	40	60	100
20CSEXX	Professional Elective - I	PE	3	0	0	3	40	60	100
20YYOXX	Open Elective – I	OE	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20CS503	Object Oriented Analysis and Design	PC	3	0	2	4	50	50	100
20CS504	Cloud Computing Services	PC	3	0	2	4	50	50	100
Practical Course(s)									
20CS505	Compiler Design Laboratory	PC	0	0	2	1	50	50	100
TOTAL			18	0	6	21	310	390	700

VI SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20CS601	Machine Learning Techniques	PC	3	0	0	3	40	60	100
20CS602	Professional Ethics and Human Values	HSS	3	0	0	3	40	60	100
20CS603	Data Analytics	PC	3	0	0	3	40	60	100
20CSEXX	Professional Elective – II	PE	3	0	0	3	40	60	100
20YYOXX	Open Elective – II	OE	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20CS604	Web Technology	PC	3	0	2	4	50	50	100
Practical Course(s)									
20CS605	Machine Learning Laboratory	PC	0	0	4	2	50	50	100
20CS606	Mini project	EEC	0	0	2	1	50	50	100
20CS607	Internship	EEC	2 Weeks			1	100	-	100
TOTAL			18	0	8	23	450	450	900

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VII SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20CS701	Software Testing and Quality Assurance	PC	3	0	0	3	40	60	100
20CSEXX	Professional Elective - III	PE	3	0	0	3	40	60	100
20CSEXX	Professional Elective - IV	PE	3	0	0	3	40	60	100
20YYOXX	Open Elective - III	OE	3	0	0	3	40	60	100
Theory with Practical Course(s)									
20CS702	Cryptography and Network Security	PC	3	0	2	4	50	50	100
20CS703	IoT Fundamentals and Architecture	PC	3	0	2	4	50	50	100
Practical Course(s)									
20CS704	Design Project	EEC	0	0	2	1	50	50	100
TOTAL			18	0	6	21	310	390	700

VIII SEMESTER									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20CSEXX	Professional Elective - V	PE	3	0	0	3	40	60	100
20CSEXX	Professional Elective - VI	PE	3	0	0	3	40	60	100
Practical Course(s)									
20CS801	Major Project	EEC	0	0	20	10	50	50	100
TOTAL			6	0	20	16	130	170	300

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Professional Electives (PE)									
Stream I Artificial Intelligence & Machine Learning									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20CSE01	Deep Learning Techniques	PE	3	0	0	3	40	60	100
20CSE02	Neural Networks and Fuzzy Logic	PE	3	0	0	3	40	60	100
20CSE03	Robotics and Intelligent Systems	PE	3	0	0	3	40	60	100
20CSE04	Business Intelligence	PE	3	0	0	3	40	60	100
20CSE05	Computer Vision and Applications	PE	3	0	0	3	40	60	100
20CSE06	Optimization Techniques	PE	3	0	0	3	40	60	100
20CSE07	Computational Intelligence	PE	3	0	0	3	40	60	100
20CSE08	Augmented Reality & Virtual Reality	PE	3	0	0	3	40	60	100
20CSE09	Natural Language Processing	PE	3	0	0	3	40	60	100
20CSE10	Social Network Analysis	PE	3	0	0	3	40	60	100

Stream II Cyber Security and Forensics									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20CSE21	Cyber Law and Ethics	PE	3	0	0	3	40	60	100
20CSE22	Cyber Forensics	PE	3	0	0	3	40	60	100
20CSE23	Ethical Hacking Fundamentals	PE	3	0	0	3	40	60	100
20CSE24	Secure Cloud Computing	PE	3	0	0	3	40	60	100
20CSE25	Information Security	PE	3	0	0	3	40	60	100
20CSE26	Quantum Cryptography	PE	3	0	0	3	40	60	100
20CSE27	Block chain and Crypto currency Technologies	PE	3	0	0	3	40	60	100
20CSE28	Cyber Crime and Computer Ethics	PE	3	0	0	3	40	60	100
20CSE29	Mobile Application Security	PE	3	0	0	3	40	60	100
20CSE30	Intrusion Detection and Prevention	PE	3	0	0	3	40	60	100

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Stream III Internet of Things

Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20CSE41	Principles of Sensors and Signal Conditioning	PE	3	0	0	3	40	60	100
20CSE42	Data Acquisition	PE	3	0	0	3	40	60	100
20CSE43	Wireless sensor Networks	PE	3	0	0	3	40	60	100
20CSE44	EDGE Computing Technologies	PE	3	0	0	3	40	60	100
20CSE45	Mobile Computing	PE	3	0	0	3	40	60	100
20CSE46	Wearable Computing	PE	3	0	0	3	40	60	100
20CSE47	IoT Programming	PE	3	0	0	3	40	60	100
20CSE48	IoT Security and Trust	PE	3	0	0	3	40	60	100
20CSE49	IoT Applications and Web development	PE	3	0	0	3	40	60	100
20CSE50	Industrial IoT	PE	3	0	0	3	40	60	100

Open Electives(OE)

Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20CSO01	Big data Tools & Analytics	OE	3	0	0	3	40	60	100
20CSO02	IoT Architecture and Protocols	OE	3	0	0	3	40	60	100
20CSO03	Programming in C	OE	3	0	0	3	40	60	100
20CSO04	GPU Architecture and Programming	OE	3	0	0	3	40	60	100
20CSO05	Software Project Management	OE	3	0	0	3	40	60	100
20CSO06	Foundations of Block chain Technology	OE	3	0	0	3	40	60	100
20CSO07	Principles of Cloud Computing	OE	3	0	0	3	40	60	100
20CSO08	Cyber Security and Ethical	OE	3	0	0	3	40	60	100
20CSO09	Multimedia and Animation	OE	3	0	0	3	40	60	100
20CSO10	Java Programming	OE	3	0	0	3	40	60	100

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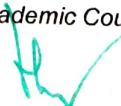
ONE CREDIT COURSES									
Code No.	Course	Category	Periods / Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20CSA01	Keras Tool	EEC	0	0	2	1	100	-	100
20CSA02	ORANGE Tool	EEC	0	0	2	1	100	-	100
20CSA03	Tensor Flow	EEC	0	0	2	1	100	-	100
20CSA04	Raspberry PI	EEC	0	0	2	1	100	-	100
20CSA05	R Programming	EEC	0	0	2	1	100	-	100
20CSA06	Hadoop- Map Reduce	EEC	0	0	2	1	100	-	100
20CSA07	WEKA Tool	EEC	0	0	2	1	100	-	100
20CSA08	Rapid Miner Tool	EEC	0	0	2	1	100	-	100
20CSA09	Maya Tool	EEC	0	0	2	1	100	-	100
20CSA10	Eclipse	EEC	0	0	2	1	100	-	100
20CSA11	Embedded Systems in Python	EEC	0	0	2	1	100	-	100
20CSA12	Linux Shell Programming	EEC	0	0	2	1	100	-	100

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SUMMARY

S. No	Category	CREDITS PER SEMESTER								Total Credit (AICTE)	Credits in %
		I	II	III	IV	V	VI	VII	VIII		
1	HSS	3	3				3			9 (10-14)	5.45%
2	BS	8	8	4	4					24 (22-28)	14.54%
3	ES	8	3	7	5					23 (24)	13.93%
4	PC		5	12	14	15	12	11		69 (48)	41.81%
5	PE					3	3	6	6	18 (18)	10.90%
6	OE					3	3	3		9	5.45%
7	EEC						2	1	10	13 (12-16)	7.87%
8	MC	0	0	0	0					0	0%
Total		19	19	23	23	21	23	21	16	165	100.00%

HSS - Humanities and Social Sciences

BS - Basic Sciences

ES - Engineering Sciences

PC - Professional Core

PE - Professional Electives

OE - Open Electives

EEC - Employability Enhancement Courses

MC - Mandatory Courses (Non-Credit Courses)

CA - Continuous Assessment

FE - Final Examination

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