



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
COURSE STRUCTURE – BR20

For UG - B.Tech: Computer Science and Engineering

I Year – I SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	20ES1T01	Basic Electrical and Electronics Engineering	3	0	0	3
2	20BS1T01	Linear Algebra & Differential Equations	3	0	0	3
3	20BS1T07	Applied Chemistry	3	0	0	3
4	20ES1T05	Programming for Problem Solving1	3	0	0	3
5	20ES1L07	Computer Engineering Workshop Lab	2	0	2	3
6	20ES1L 01	Basic Electrical and Electronics Engineering Lab	0	1	2	1.5
7	20BS1L03	Applied Chemistry Lab	0	0	3	1.5
8	20ES1L08	Programming for Problem Solving1 Lab	0	0	3	1.5
	20HS1M01	*Induction Training	3	0	0	0
Total Credits			16	1		19.5

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University Nominee	Subject Expert	Subject Expert	Industry Expert	Alumni	Chairman – BoS



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S. No	Course Code	Subjects	L	T	P	Credits
1	20HS2T01	English	3	0	0	3
2	20BS2T02	Integral Transforms and Calculus	3	0	0	3
3	20ES2T04	Engineering Drawing	2	0	2	3
4	20BS2T05	Applied Physics	3	0	0	3
5	20ES2T06	Programming for Problem Solving 2	3	0	0	3
6	20BS2L01	Applied Physics Lab	0	0	3	1.5
7	20ES2L09	Programming for Problem Solving 2 Lab	0	0	3	1.5
8	20HS2L01	English Communication Skills Lab	0	0	3	1.5
	20HS2M02	* Indian Constitution	2	0	0	0
Total Credits			17	1	8	19.5

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S.No	Course Code	Courses	L	T	P	Credits
1	20BS3T03	Probability and Statistics	3	0	0	3
2	20CS3T02	Unified Modeling Language & DP	3	0	0	3
3	20CS3T03	Advanced Data Structure	3	0	0	3
4	20ES3T04	Python Programming	3	0	0	3
5	20CS3T05	Digital Logic Design	3	0	0	3
6	20CS3L06	Advanced Data Structure Lab	0	0	3	1.5
7	20ES3L07	Python & R Programming Lab	0	0	3	1.5
8	20CS3L08	Unified Modeling Language & DP Lab	0	0	3	1.5
9	20CS3S01	Employability Skills (Java Script/JSON)	1	0	2	2
MC	20BS3M03	*Environmental Science	2	0	0	0
Total			21	0	8	21.5

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S.No	Course Code	Courses	L	T	P	Credits
1	20BS4T04	Numerical Methods and Complex Variables	3	0	0	3
2	20CS4T06	Java Programming	3	0	0	3
3	20HS4T02	Managerial Economics and Financial Analysis	3	0	0	3
4	20CS4T07	Operating Systems	3	0	0	3
5	20CS4T08	Mathematical Foundations of Computer Science	3	0	0	3
6	20CS4L07	Java Programming Lab	0	0	3	1.5
7	20CS4L09	Operating System Lab	0	0	3	1.5
8	20CS4L10	UNIX Lab	0	0	3	1.5
9	20CS4S02	Skill Oriented Course - Mongo Data Base	1	0	2	2
Total			16	0	11	21.5

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S.No	Course Code	Courses	L	T	P	Credits
1	20CS5T09	Computer Networks	3	0	0	3
2	20CS5T10	Formal Language and Automata Theory	3	0	0	3
3	20CS5T11	Data Base Management System	3	0	0	3
4	20CS5E01 20CS5E02 20CE5E01 20ME5E01	Open Elective- I 1. Computer Organization 2. Object Oriented Programming 3. Interior Space Design 4. Industrial Automation and Robotics	3	0	0	3
5	20CS5D01 20CS5D02 20CS5D03 20CS5D04	Professional Elective- I 1. Data Communications. 2. Principles of Programming Languages 3. Software Engineering 4. Advanced Computer Architecture/ MOOCs-1	3	0	0	3
6	20CS5L11	Computer Networks Lab	0	0	3	1.5
7	20CS5L12	DBMS Lab	0	0	3	1.5
8	20HS5M04	Foreign Language	2	0	0	0
9	20CS5S03	Skill Advanced Course :APP Development	1	0	2	2
10	20CS5P01	Summer Internship	0	0	3	1.5
Total			21	0	11	21.5

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III Year – II SEMESTER

S.No	Course Code	Courses	L	T	P	Credits
1	20CS6T12	Compiler Design	3	0	0	3
2	20CS6T13	Data mining and Data warehousing	3	0	0	3
3	20CS6T14	Design and Analysis of Algorithms	3	0	0	3
4	20CS6D05 20CS6D06 20CS6D07 20CS6D08	Professional Elective -II 1.Machine Learning 2.Big Data Analytics 3. Distributed Systems 4.Network Programming/MOOCs-2	3	0	0	3
5	20CS6E03 20ME6E02 20CE6E02 20EC6E02	Open Elective- II (Inter Disciplinary) 1. Mean Stack Development 2. Operations Research 3. Green Building 4. Internet of Things	2	0	2	3
6	20CS6L13	Compiler Design Lab	0	0	3	1.5
7	20CS6L14	Data Mining Lab	0	0	3	1.5
8	20CS6L15	Web Technology Lab	0	0	3	1.5
9	20CS6S04	Skill Advanced course: Game Development	1	0	2	2
10	20HS6M05	Universal Human Values	2	0	0	0
Total			17	0	13	21.5

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IV Year I Semester

S.No	Course Code	Courses	L	T	P	Credits
1	20CS7D09 20CS7D10 20CS7D11 20CS7D12	Professional Elective -III 1. Cryptography and Network Security 2. Neural Networks 3. Ad-hoc and Sensor Networks 4. Cyber Security & Forensics/MOOCs-3	3	0	0	3
2	20CS7D13 20CS7D14 20CS7D15 20CS7D16	Professional Elective -IV 1. Software Testing Methodologies 2. Deep Learning Techniques 3. Social Networks & Semantic Web 4. Computer Vision	3	0	0	3
3	20CS7D17 20CS7D18 20CS7D19 20CS7D20	Professional Elective -V 1. Mobile Computing 2. Block-Chain Technologies 3. Wireless Network Security 4. Ethical Hacking	3	0	0	3
4	20CS7E04 20CE7E03 20EC7E03 20EE7E03	Open Elective -III 1. Nature Inspired Computing Techniques 2. Disaster Management 3. Embedded Systems 4. Electrical Distribution Systems	2	0	2	3
5	20CS7E05 20EC7E04 20ME7E04 20CE7E04	Open Elective- IV 1. Secure Coding Techniques 2. 5G Communications 3. 3D Printing Technologies 4. Project Management	2	0	2	3
6	20HS7E01	Humanity and Social Science Elective 1.Resource Management 2. Industrial Management 3. Management Science 4. IPR and Patents	3	0	0	3
7	20HS7S01	English for Employability	1	0	2	2
8	20CS7P02	Industrial/Research Internship 2 months after III_I Evaluated during IV_I	0	0	6	3
Total			17	0	12	23

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BONAM VENKATA CHALAMAYYA ENGINEERING COLLEGE ODALAREVU – 533 210,
Andhra Pradesh, India

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IV Year II Semester

S.No	Course Code	Courses	L	T	P	Credits
1	20CS8P03	Major Project Work	0	0	24	12
Total			0	0	24	12

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