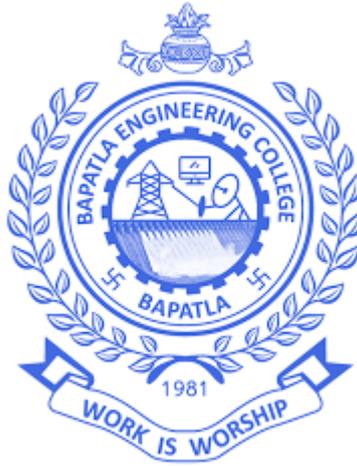


Bapatla Engineering College

(Autonomous)

BAPATLA



Department of Computer Science and Engineering

B.Tech

Computer Science and Engineering

Curriculum Effective from A.Y. 2018-19

(R18 Regulations)



Bapatla Engineering College:: Bapatla

(Autonomous under Acharya Nagarjuna University)

(Sponsored by Bapatla Education Society)

BAPATLA - 522102 Guntur District, A.P., India

www.becbapatla.ac.in

Bapatla Engineering College::Bapatla
(Autonomous)
Department of Computer Science and Engineering

COURSE STRUCTURE

Course Structure Summary:

S.No.	Category	Proposed	Percentage
1	Humanities & Social Science including Management Courses	9	6
2	Basic Science Courses	26	16
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	22	13
4	Professional Core Courses	71	41
5	Professional Elective Courses	17	11
6	Open Elective Courses	6	4
7	Project work, seminar and internship in industry or elsewhere	12	7
8	Industry Internship	2	1
9	MOOCs	2	1
8	Mandatory Courses [Indian Constitution, Essence of Indian Traditional Knowledge etc]	(non-credit courses)	--
	Total:-	167	100

Semester wise Credits

SEMESTER	Credits
I	16
II	22
III	24
IV	22
V	22
VI	21
VII	21
VIII	19
Total	167

BAPATLA ENGINEERING COLLEGE : BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
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Effective from the Academic Year 2018-2019 (R18 Regulations)
First Year B.Tech (SEMESTER – I)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
INDUCTION PROGRAM									
18MA001	Linear Algebra and ODE	4	0	0	4	50	50	100	3
18CY001	Engineering Chemistry	4	0	0	4	50	50	100	3
18CE001	Environmental Studies	3	0	0	3	50	50	100	2
18EL001	Communicative English	3	0	0	3	50	50	100	2
18MEL01	Engineering Graphics	1	0	4	5	50	50	100	3
18CYL01	Chemistry Lab	0	0	3	3	50	50	100	1
18MEL02	Workshop	0	0	3	3	50	50	100	1
18ELL01	English Communication Lab	0	0	3	3	50	50	100	1
	TOTAL	15	0	13	28	400	400	800	16

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

L: Lecture,

T: Tutorial,

P: Practical

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First Year B.Tech (SEMESTER – II)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA002	Numerical methods and Advanced Calculus	4	0	0	4	50	50	100	3
18PH001	Semiconductor Physics	4	1	0	5	50	50	100	4
18CS203	Professional Ethics & Human Values	4	0	0	4	50	50	100	3
18CS204	Digital Logic Design	4	0	0	4	50	50	100	3
18EE001	Basic Electronics & Electrical Engineering	4	0	0	4	50	50	100	3
18CS001	Problem Solving using Programming	4	0	0	4	50	50	100	3
18PHL01	Semiconductor Physics Lab	0	0	3	3	50	50	100	1
18EEL01	Basic Electronics & Electrical Engineering Lab	0	0	3	3	50	50	100	1
18CSL01	Problem Solving using Programming Lab	0	0	3	3	50	50	100	1
	TOTAL	24	1	9	34	450	450	900	22

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Effective from the Academic Year 2018-2019 (R18 Regulations)
Second Year B.Tech (SEMESTER – III)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA003	Probability & Statistics	4	0	0	4	50	50	100	3
18CS302	Data Structures	4	0	0	4	50	50	100	3
18CS303	Discrete Mathematics	4	0	0	4	50	50	100	3
18CS304	Object Oriented Programming	4	0	0	4	50	50	100	3
18CS305	Operating System	4	0	0	4	50	50	100	3
18CS306	Microprocessor & Microcontrollers	4	0	2	6	50	50	100	4
18CSL31	Unix Programming Lab	2	0	3	5	50	50	100	3
18CSL32	Data Structures Lab	0	0	3	3	50	50	100	1
18CSL33	OOPs Lab	0	0	3	3	50	50	100	1
	TOTAL	26	0	11	37	450	450	900	24

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

L: Lecture,

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P: Practical

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Second Year B.Tech (SEMESTER – IV)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18MA005	Operation Research	4	0	0	4	50	50	100	3
18CS402	Web Technologies	4	0	0	4	50	50	100	3
18CS403	Database Management System	4	0	0	4	50	50	100	3
18CS404	Computer Organization	4	0	0	4	50	50	100	3
18EL002	Technical English	3	0	0	3	50	50	100	2
18CS406	Design and Analysis of Algorithms	4	0	0	4	50	50	100	3
18CSL41	Python Programming Lab	2	0	3	5	50	50	100	3
18CSL42	Web Technologies Lab	0	0	3	3	50	50	100	1
18CSL43	RDBMS Lab	0	0	3	3	50	50	100	1
	TOTAL	26	0	9	35	450	450	900	22

CIE: Continuous Internal Evaluation

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Third Year B.Tech (SEMESTER – V)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18CS501	Software Engineering	4	0	0	4	50	50	100	3
18CS502	Automata Theory & Formal Languages	4	0	0	4	50	50	100	3
18CS503	Enterprise Programming	4	0	0	4	50	50	100	3
18CS504	Computer Networks	4	0	0	4	50	50	100	3
18CS505	Essence of Indian Traditional Knowledge	3	0	0	3	50	50	100	0
18CSD1_	Department Elective-I	4	0	0	4	50	50	100	3
18CSL51	C# Programming	2	0	3	5	50	50	100	3
18CSL52	Enterprise Programming Lab	0	0	3	3	50	50	100	1
18ELL02	Soft Skills Lab	0	0	3	3	50	50	100	1
18CSMO1	MOOCs								2
	TOTAL	25	0	9	34	450	450	900	22

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

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<u>Department Elective-I</u>	
18CSD11	Advanced Computer Architecture.
18CSD12	Data Warehousing & Data Mining
18CSD13	Distributed Computing.

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Third Year B.Tech (SEMESTER – VI)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18CS601	Machine Learning	4	0	0	4	50	50	100	3
18CS602	Compiler Design	4	0	0	4	50	50	100	3
18CS603	Cryptography & Network Security	4	0	0	4	50	50	100	3
18CS604	Middleware Technologies	4	0	0	4	50	50	100	3
18CSD2_	Department Elective-II	4	0	0	4	50	50	100	3
18CSD3_	Department Elective-III	4	0	0	4	50	50	100	3
18CSL61	Machine Learning Lab	0	0	3	3	50	50	100	1
18CSL62	Middleware Technologies Lab	0	0	3	3	50	50	100	1
18CSLD2_	Dept. Elective-II Lab	0	0	3	3	50	50	100	1
	TOTAL	24	0	9	33	450	450	900	21

CIE: Continuous Internal Evaluation
L: Lecture,

SEE: Semester End Examination

T: Tutorial,

P: Practical

Department Elective-II	
18CSD21	Mobile Application Development
18CSD22	Cloud Programming
18CSD23	Statistics with R

Dept. Elective-II Lab	
18CSLD21	Mobile Application Development Lab
18CSLD22	Cloud Programming Lab
18CSLD23	Statistics with R Lab

Department Elective-III	
18CSD31	Artificial Intelligence
18CSD32	Software Project Management
18CSD33	Block chain Technologies

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Forth Year B.Tech (SEMESTER – VII)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18CS701	Full Stack Development	4	0	0	4	50	50	100	3
18CS702	Wireless Networks	4	0	0	4	50	50	100	3
18_ _I_ _	Institutional Elective -I	4	0	0	4	50	50	100	3
18CSD4_	Department Elective-IV	4	0	0	4	50	50	100	3
18CS705	Constitution of India	3	0	0	3	50	50	100	0
18CSL71	Unified Modeling Language Lab	2	0	3	5	50	50	100	3
18CSL72	Full Stack Development Lab	0	0	3	3	50	50	100	1
18CSLD4_	Dept. Elective-IV Lab	0	0	3	3	50	50	100	1
18CSP01	Project - I	0	0	4	4	50	50	100	2
18CSII1	Internship					100	--	100	2
	TOTAL	21	0	13	34	550	450	1000	21

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

L: Lecture,

T: Tutorial,

P: Practical

Department Elective-IV	
18CSD41	Cyber Security
18CSD42	Internet of Things
18CSD43	Big Data Analytics

Dept. Elective-IV Lab	
18CSLD41	Cyber Security Lab
18CSLD42	Internet of Things Lab
18CSLD43	Big Data Analytics Lab

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Forth Year B.Tech (SEMESTER – VIII)

Code No.	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
		L	T	P	Total	CIE	SEE	Total Marks	
18ME005	Industrial Management & Entrepreneurship Development	4	0	0	4	50	50	100	3
18_ _I_ _	Institutional Elective -II	4	0	0	4	50	50	100	3
18CSD5_	Department Elective - V	4	0	0	4	50	50	100	3
18CSP02	Project - II	0	0	10	10	75	75	150	10
	TOTAL	12	0	10	22	225	225	450	19

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

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Department Elective - V	
18CSD51	Protocols for Secure Electronic Commerce
18CSD52	Artificial Neural Networks and Deep Learning
18CSD53	Natural Language Processing.

BAPATLA ENGINEERING COLLEGE : BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
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Institutional Electives (R18 Regulations)

Institutional Elective – 1

S.NO	CODE	TITLE
1.	18CE101	AIR POLLUTION & CONTROL
2.	18CE102	RURAL WATER SUPPLY AND ENVIRONMENT SANITATION
3.	18CS101	JAVA PROGRAMMING
4.	18CS102	DATABASE MANAGEMENT SYSTEM
5.	18ECI01	DIGITAL IMAGE PROCESSING
6.	18ECI02	EMBEDDED SYSTEMS
7.	18EEI01	APPLICATIONS OF WAVELETS TO ENGINEERING PROBLEMS
8.	18EEI02	INDUSTRIAL ELECTRICAL SYSTEMS
9.	18EII01	PRINCIPLES & APPLICATIONS OF MEMS
10.	18EII02	POWER PLANT INSTRUMENTATION
11.	18ITI01	INTRODUCTION TO DATA ANALYTICS
12.	18ITI02	CYBER SECURITY
13.	18ME101	FLUID POWER & CONTROL SYSTEMS
14.	18ME102	PROJECT MANAGEMENT
15.	18MA006	GRAPH THEORY
16.	18PH101	NANO MATERIALS AND TECHNOLOGY
17.	18PH102	FIBER OPTICS COMMUNICATIONS
18.	18EL003	PROFESSIONAL COMMUNICATION
19.	18NC001	NCC (NATIONAL CADET CORPS)

Institutional Elective – II

S.NO	CODE	TITLE
1.	18CE103	DISASTER MANAGEMENT
2.	18CE104	REMOTE SENSING & GIS
3.	18CS103	PYTHON PROGRAMMING
4.	18CS104	COMPUTER NETWORKS
5.	18ECI03	WIRELESS COMMUNICATIONS
6.	18ECI04	ARTIFICIAL NEURAL NETWORKS
7.	18EEI03	HIGH VOLTAGE ENGINEERING
8.	18EEI04	ELECTRICAL ENERGY CONSERVATION & AUDITING
9.	18EII03	ROBOTICS AND AUTOMATION
10.	18EII04	SENSORS AND SIGNAL CONDITIONING
11.	18ITI03	MOBILE APPLICATION DEVELOPMENT
12.	18ITI04	WEB TECHNOLOGIES
13.	18ME103	NON-CONVENTIONAL ENERGY SOURCES
14.	18ME104	AUTOMOBILE ENGINEERING
15.	18PH103	ADVANCED MATERIALS
16.	18PH104	OPTO ELECTRONIC DEVICES AND APPLICATIONS
17.	18EL004	ENGLISH FOR COMPETITIVE EXAMINATIONS
18.	18NC001	NCC (NATIONAL CADET CORPS)