BAPATLA ENGINEERING COLLEGE:: BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
First Year B.Tech (SEMESTER – I) structure as per APSHEC
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Hours per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
20CS101/MA01	BS	Linear algebra and differential equations	3	0	0	3	30	70	100	3
20CS102/CY01	BS	Engineering Chemistry	3	0	0	3	30	70	100	3
20CS103/EL01	HS	Communicative English	3	0	0	3	30	70	100	3
20CS203/EE01	ES	Basic Electronics & Electrical Engineering	3	0	0	3	30	70	100	3
20CS104/MEL1	ES	Engineering Graphics	1	0	4	5	30	70	100	3
20CS1L1/CYL1	BS	Chemistry Lab	0	0	3	3	30	70	100	1.5
20CS1L2/ELL1	HS	English Communication skills Lab	0	0	3	3	30	70	100	1.5
20CS2L2/EEL1	ES	Basic Electronics & Electrical Engineering Lab	0	0	3	3	30	70	100	1.5
INDUCTION PROGRAM	First Three Weeks (Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Familiarization to Dept./Branch & Innovations)									
TOTAL			**13**	0	**13**	**26**	**240**	**560**	**800**	**19.5**

CIE: Continuous Internal Evaluation SEE: Semester End Examination
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1 Hr. Lecture (L) per week - 1 credit
1 Hr. Tutorial (T) per week - 1 credit
1 Hr. Practical (P) per week - 0.5 credits
2 Hours Practical (Lab)/week - 1 credit

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
First Year B.Tech (SEMESTER – II)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
20CS201/MA02	BS	Numerical methods& Advanced Calculus	3	0	0	3	30	70	100	3
20CS202/PH03	BS	Semiconductor Physics	3	0	0	3	30	70	100	3
20CS204/CS01	ES	Programming for Problem Solving	3	0	0	3	30	70	100	3
20CS205/CS02	ES	Digital Logic Design	3	0	0	3	30	70	100	3
20CS206/CS03	ES	Discrete Mathematics	3	0	0	3	30	70	100	3
20MC01/CE01	MC	Environmental Studies	2	0	0	2	30	0	30	0
20CS2L1/PHL1	BS	Semiconductor Physics Lab	0	0	3	3	30	70	100	1.5
20CS2L3/CSL1	ES	Programming for Problem Solving Lab	0	0	3	3	30	70	100	1.5
20CS1L3/MEL2	ES	Workshop Practice Lab	0	0	3	3	30	70	100	1.5
NCC/NSS			0	0	3	3				0
TOTAL			**17**	**0**	12	**29**	**270**	**560**	**830**	**19.5**

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Second Year B.Tech (SEMESTER – III)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	BS	Probability & Statistics	3	0	0	3	30	70	100	3
	PC	Data Structures	3	0	0	3	30	70	100	3
	PC	Object Oriented Programming	3	0	0	3	30	70	100	3
	PC	Operating System	3	0	0	3	30	70	100	3
	PC	Computer Organization	3	0	0	3	30	70	100	3
	MC	Professional Ethics & Human Values	2	0	0	2	30	0	30	0
	PC	Data Structures Lab	0	0	3	3	30	70	100	1.5
	PC	Object Oriented Programming Lab	0	0	3	3	30	70	100	1.5
	SO	UNIX	2	0	3	5	30	70	100	3.5
TOTAL			**19**	**0**	9	**28**	**270**	560	**830**	**21.5**

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Second Year B.Tech (SEMESTER – IV)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	ES	Microprocessor & Microcontrollers	3	0	0	3	30	70	100	3
	PC	Web Technologies	3	0	0	3	30	70	100	3
	PC	C# Programming	3	0	0	3	30	70	100	3
	PC	Design and Analysis of Algorithms	3	0	0	3	30	70	100	3
	HS	Technical English	3	0	0	3	30	70	100	3
	PC	Web Technologies Lab	0	0	3	3	30	70	100	1.5
	PC	C# Programming Lab	0	0	3	3	30	70	100	1.5
	SO	Python	2	0	3	5	30	70	100	3.5
TOTAL			**17**	**0**	9	**26**	**240**	**560**	**800**	**21.5**
Honors/Minor Course (Pool 1)			**3**	**1**	0	**4**	**30**	**70**	**100**	**4**
Grand Total			**20**	**1**	9	**30**	**270**	**630**	**900**	**25.5**

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Third Year B.Tech (SEMESTER – V)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	PC	Automata Theory & Formal Languages	3	0	0	3	30	70	100	3
	PC	Computer Networks	3	0	0	3	30	70	100	3
	PC	Database Management System	3	0	0	3	30	70	100	3
	JO	Job Oriented Elective - 1	3	0	0	3	30	70	100	3
	PE	Professional Elective - 1	3	0	0	3	30	70	100	3
	MC	Essence of Indian Traditional Knowledge	2	0	0	2	30	0	30	0
	PC	RDBMS Lab	0	0	3	3	30	70	100	1.5
	JO	Job Oriented Elective Lab -1	0	0	3	3	30	70	100	1.5
	SO	Soft Skills Lab	1	0	2	3	30	70	100	2
	INT	Summer Internship	0	0	0	0	0	0	0	1.5
TOTAL			**18**	**0**	8	**26**	**270**	**560**	**830**	**21.5**
Honors/Minor Course (Pool 2)			**3**	**1**	0	**4**	**30**	**70**	**100**	**4**
Grand Total			**21**	**1**	8	**30**	**300**	**630**	**930**	**25.5**

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Third Year B.Tech (SEMESTER – VI)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	PC	Compiler Design	3	0	0	3	30	70	100	3
	PC	Software Engineering	3	0	0	3	30	70	100	3
	PC	Cryptography & Network Security	3	0	0	3	30	70	100	3
	PE	Professional Elective -2	3	0	0	3	30	70	100	3
	JO	Job Oriented Elective - 2	3	0	0	3	30	70	100	3
	MC	Constitution of India	2	0	0	2	30	0	30	0
	PC	Software Engineering Lab	0	0	3	3	30	70	100	1.5
	PC	Cryptography & Network Security Lab	0	0	3	3	30	70	100	1.5
	JO	Job Oriented Elective Lab - 2	0	0	3	3	30	70	100	1.5
	SO	Quantitative Aptitude	1	0	2	3	30	70	100	2
TOTAL			**18**	**0**	11	**29**	**300**	**630**	**930**	**21.5**
Honors/Minor Course (Pool 3)			**3**	**1**	0	**4**	**30**	**70**	**100**	**4**
Grand Total			**20**	**1**	9	**30**	**270**	**630**	**900**	**25.5**

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BAPATLA ENGINEERING COLLEGE:: BAPATLA
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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Fourth Year B.Tech (SEMESTER – VII)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	PE	Professional Elective - 3	3	0	0	3	30	70	100	3
	PE	Professional Elective - 4	3	0	0	3	30	70	100	3
	JO	Job Oriented Elective - 3	3	0	0	3	30	70	100	3
	JO	Job Oriented Elective - 4	3	0	0	3	30	70	100	3
	HS	Industrial Management & Entrepreneurship Development	3	0	0	3	30	70	100	3
	JO	Job Oriented Elective – 3 Lab	0	0	3	3	30	70	100	1.5
	JO	Job Oriented Elective – 4 Lab	0	0	3	3	30	70	100	1.5
	SO	Logical Reasoning	1	0	2	3	30	70	100	2
	INT	Industrial/ Research Internship	0	0	0	0	0	0	0	3
TOTAL			**16**	**0**	8	**24**	**240**	**560**	**800**	**23**
Honors/Minor Course (Pool 4)			**3**	**1**	0	**4**	**30**	**70**	**100**	**4**
Grand Total			**20**	**1**	9	**30**	**270**	**630**	**900**	**27**

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SCHEME OF INSTRUCTION & EXAMINATION (Semester System)
For
Computer Science & Engineering
Fourth Year B.Tech (SEMESTER – VIII)
for the Academic Year 2020-21

Code No.	Category Code	Subject	Scheme of Instruction (Periods per week)				Scheme of Examination (Maximum marks)			No. of Credits
			L	T	P	Total	CIE	SEE	Total Marks	
	PROJ	Project Work	0	0	0	0	50	100	150	12
Honors/Minor Courses (MOOCs - 1)			**0**	**0**	0	**0**	**0**	**0**	**0**	**2**
Honors/Minor Courses (MOOCs - 2)			**0**	**0**	0	**0**	**0**	**0**	**0**	**2**
Grand Total			**0**	**0**	0	**0**	**50**	**100**	**150**	**16**

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List of Professional Electives:-	**List of Job Oriented Electives**:-
1. Wireless Networks	1. Enterprise Programming
2. Data Warehousing & Data Mining	2. Middleware Technologies
3. Distributed Computing.	3. Machine Learning
4. Artificial Intelligence	4. Mobile Application Development
5. Software Project Management	5. Cloud Programming
6. Block chain Technologies	6. Statistics with R
7. Protocols for Secure Electronic Commerce	7. Cyber Security
8. Artificial Neural Networks and Deep Learning	8. Internet of Things
9. Natural Language Processing	9. Big Data Analytics

List of Honors Courses:-	
Pool-1:- 1. Advanced Data Structures. 2. File Structures. 3. Graph Theory 4. Numerical Optimization.	Pool -2 :- 1. Advanced Computer Architecture. 2. Real Time Operating Systems. 3. Parallel Algorithms. 4. Embedded Systems.
Pool-3 :- 1. Advanced Database Systems 2. Storage Area Networks 3. Computational Complexity. 4. Competitive Programming.	Pool -4 :- 1. Web Semantics. 2. Spatial Informatics. 3. Perception & Computer Vision. 4. Virtual Reality