GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY (A)
CHAITANYA NAGAR, RAJAHMUNDRY

Course Structure of
B.Tech. Programme in Computer Science and Engineering
(Cyber Security)
Regulation: GRBT-20

I Year I Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		BSC	Mathematics-I	3	0	0	3	30	70	100
2		HSMC	Communicative English	3	0	0	3	30	70	100
3		BSC	Engineering Chemistry	3	0	0	3	30	70	100
4		ESC	Problem Solving & Programming in C	3	0	0	3	30	70	100
5		ESC	Engineering Graphics	1	0	4	3	30	70	100
6		BSC	Engineering Chemistry Laboratory	0	0	3	1.5	50	50	100
7		ESC	Computer Engineering Workshop	0	0	3	1.5	50	50	100
8		ESC	Problem Solving & Programming in C Lab	0	0	3	1.5	50	50	100
			Total =	**13**	**0**	**13**	**19.5**	**300**	**500**	**800**

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I Year II Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		BSC	Mathematics-II	3	0	0	3	30	70	100
2		BSC	Applied Physics	3	0	0	3	30	70	100
3		ESC	Fundamentals of Digital Electronics	3	0	0	3	30	70	100
4		ESC	Data Structures	3	0	0	3	30	70	100
5		ESC	Python Programming	3	0	0	3	30	70	100
6		BSC	Applied Physics Laboratory	0	0	3	1.5	50	50	100
7		ESC	Data Structures Lab	0	0	3	1.5	50	50	100
8		HSMC	Communicative English Lab	0	0	3	1.5	50	50	100
9		MC	Environmental Science	2	0	0	0	30*	---	---
			Total =	**17**	**0**	**9**	**19.5**	**300**	**500**	**800**

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Course Structure of
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Regulation: GRBT-20

II Year I Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int	Ext	Total
1		BSC	Mathematical Foundations of Cyber Security	2	1	0	3	30	70	100
2		PCC	Design and Analysis of Algorithms	3	0	0	3	30	70	100
3		PCC	Computer Organization	3	0	0	3	30	70	100
4		PCC	Object Oriented Programming through JAVA	3	0	0	3	30	70	100
5		HSBC	Managerial Economics and Financial Analysis	3	0	0	3	30	70	100
6		PCC	Data Analysis Lab	0	0	3	1.5	50	50	100
7		PCC	Object Oriented Programming through JAVA Lab	0	0	3	1.5	50	50	100
9		PCC	Linux and Shell Programming Lab	0	0	3	1.5	50	50	100
10		SC	Web Application Development Using Full Stack Module -1	0	1	2	2	---	50	50
11		MC	Constitution of India	2	0	0	0	30	70*	100
			Total =	**16**	**2**	**11**	**21.5**	**330**	**620**	**950**

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II Year II Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		BSC	Statistics with R Programming	2	1	0	3	30	70	100
2		PCC	Formal Languages and Automata Theory	3	0	0	3	30	70	100
3		PCC	Operating Systems	3	0	0	3	30	70	100
4		PCC	Database Management Systems	3	0	0	3	30	70	100
5		PCC	Software Engineering	3	0	0	3	30	70	100
6		PCC	R Programming Lab	0	0	3	1.5	50	50	100

7		PCC	Database Management Systems Lab	0	0	3	1.5	50	50	100
8		PCC	Operating Systems & Software Engineering Lab	0	0	3	1.5	50	50	100
9		SC	Web Application Development Using Full Stack Module -2	0	1	2	2	---	50	50
			Total =	**16**	**2**	**11**	**21.5**	**300**	**550**	**850**
			Minor courses	**4**	**0**	**0**	**4**			
# After II B.Tech II Semester Summer Internship/ Mini Project-1 is mandatory. Evaluation should be III year I semester.										

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III Year I Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	201CY501	PCC	Principles of Cyber Security	3	0	0	3	30	70	100
2	201CS502	PCC	Compiler Design	3	0	0	3	30	70	100
3	201CS503	PCC	Computer Networks	3	0	0	3	30	70	100
4	201CY564A	PEC	Professional Elective-I a) Cryptanalysis b) Data Mining and Data Warehousing c) Natural Language Processing d) MOOCS:NPTEL/SWAYAM	3	0	0	3	30	70	100
5	201AM565a	OEC	Open Electives –I/ Job Oriented Elective a) Environmental Pollution & Control b) Fundamentals of Utilization of Electrical Energy c) Robotics d) Microprocessors and its interfacing e) Foundations of Operating Systems f) Elements of Mining Technology g) Basic Automobile Engineering h) Fundamentals of Petroleum Engineering i) Principles of Management	3	0	0	3	30	70	100

6	201HB591	MC	Quantitative Aptitude and Reasoning	2	0	0	0	30	70	100
7	201CY511	PCC	Cyber Security Lab	0	0	3	1.5	50	50	100
8	201CS512	PCC	Internetworking Protocol Lab	0	0	3	1.5	50	50	100
9	201CS581	SC	Web Application Development Using Full Stack Module -3	0	1	2	2	--	50	50
10	201CS521/201CS531	PROJ	Summer Internship/ Mini Project-1	0	0	0	1.5	100	---	100
Total =				**17**	**1**	**8**	**21.5**	**380**	**570**	**950**
Minor courses				**4**	**0**	**0**	**4**			

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III Year II Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	201CS601	PCC	Cryptography & Network Security	3	0	0	3	30	70	100
2	201CY602	PCC	Ethical Hacking	3	0	0	3	30	70	100
3	201CY603	PCC	Artificial Intelligence	3	0	0	3	30	70	100
4	201CY664A	PEC	Professional Elective-II a) Biometric Security b) Advanced Data Structures c) Mean Stack Technologies d) MOOCS: NPTEL/SWAYAM	3	0	0	3	30	70	100
5	201XX665a	OEC	Open Electives –II/ Job Oriented Elective a) Solid Waste Management b) Concepts of Power System Engineering c) Introduction to MEMS d) IOT and its Applications e) Fundamentals of Databases f) Open Pit Slope Analysis and Design g) Hybrid and Electric Vehicles h) Basic Concepts in Petroleum Drilling	3	0	0	3	30	70	100

			Engineering i) Operations Management							
6	201MB691	MC	IPR and Patents	2	0	0	0	30	70	100
7	201CS611	PCC	Cryptography & Network Security Lab	0	0	3	1.5	50	50	100
8	201CY612	PCC	Ethical Hacking Lab	0	0	3	1.5	50	50	100
9	201CY613	PEC	AI Tools and Techniques Lab	0	0	3	1.5	50	50	100
10	201HB681	SC	English for Career	0	1	2	2	--	50	50
Total =				**17**	**1**	**11**	**21.5**	**330**	**620**	**950**
Minor courses				**4**	**0**	**0**	**4**			
Industrial/ Research Internship/ Miniproject-2 is mandatory. Evaluation should be in IV year I semester										

GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY (A)
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Tentative Course Structure of
B.Tech. Programme in Computer Science & Engineering
(Cyber Security)
Regulation: GRBT-20

IV Year I Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		PEC	Professional Elective-III a) Cyber Crime Investigation and Digital Forensics b) Mobile and Wireless Security c) Mobile Computing d) Information Coding Techniques	3	0	0	3	30	70	100
2		PEC	Professional Elective-IV a) Distributed Systems b) Secure Cloud Computing c) Malware Analysis & Reverse Engineering d) MOOCS-NPTEL/SWAYAM	3	0	0	3	30	70	100
3		PEC	Professional Elective-V a) Intrusion Detection and Prevention System b) Block Chain Technologies and its Applications c) Software Testing Methodologies d) MOOCS-NPTEL/SWAYAM	3	0	0	3	30	70	100
4		OEC	Open Electives-III/ Job Oriented Elective	3	0	0	3	30	70	100
5		OEC	Open Electives –IV/ Job Oriented Elective	3	0	0	3	30	70	100
6		HSMC	UHV 2 - Understanding Harmony	3	0	0	3	30	70	100
7		SOC	Multimedia Application Development	0	1	2	2	---	50	50
8		PR	Industrial/ Research Internship/	0	0	0	3	100	---	100

			Miniproject-2							
Total =				**18**	**1**	**2**	**23**	**280**	**470**	**750**
Minor courses				**4**	**0**	**0**	**4**			

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IV Year II Semester

S. No	Course Code	Course Type	Course Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		PROJ	Project Project Work, Seminar, Internship	0	0	0	8	60	140	200
Total =				**0**	**0**	**0**	**8**			

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Course Structure of
B.Tech. Programme in Computer Science and Engineering
RegulationOpen Elective

Branch	Open Elective 1 (III B.Tech I Sem)	Open Elective 2 (III B.Tech II Sem)
CE	Environmental Pollution & Control	Solid Waste Management
EEE	Fundamentals of Utilization of Electrical Energy	Concepts of Power System Engineering
ME	Robotics	Introduction to MEMS
ECE	Microprocessors and Microcontrollers	IOT and its Applications
CSE	Foundations of Operating Systems	Fundamentals of Databases
MM	Elements of Mining Technology	Open Pit Slope Analysis and Design
AME	Basic Automobile Engineering	Hybrid and Electric Vehicles
PET	Fundamentals of Petroleum Engineering	Basic Concepts in Petroleum Drilling Engineering
MBA	Principles of Management	Operations Management

Branch	Open Elective 3 (IV B.Tech I Sem)	Open Elective 4 (IV B.Tech I Sem)

CE	Building Technology	Safety Engineering
EEE	Fundamentals of Smart Grid Technologies	Basics of Electrical Measurements and Instrumentation
ME	Nano Technology and its Applications	Introduction to Operations Research
ECE	Embedded Systems	Digital Image Processing
CSE	Information Security	Human Computer Interaction
MM	Mining and its Importance	Remote Sensing & GIS in Mining
AME	Modern Vehicle Technology	Alternative Energy Resources for Automotives
PET	Introduction to Petroleum Production Engineering	Basic Concepts in Reservoir Engineering
MBA	Entrepreneurship for Engineers	Digital Marketing