

# GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

Approved by AICTE, Accredited by NBA & NAAC 'A' Grade, Recognized under 2(f) and 12(b) of UGC, Permanently Affiliated to JNTUK, Kakinada.

NH-16, Chaitanya Knowledge City, Rajamahendravaram-533296. E.G.Dt.,- AP



An Autonomous Institution  
NBA Accredited & NAAC A+

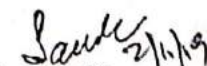
## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### 4 Years B.Tech Course Structure

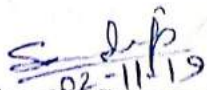
(2019-20)

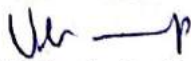
  
Dr. M. Sailaja  
(University Nominee)

  
Dr. P. Rajesh Kumar  
(Subject Expert)

  
Mr. S. Surya Shankar  
(Industrial Expert)

  
Dr. S. V. R. K. Rao  
(Chairman, BOS)

  
Dr. Sandip Swarnakar  
(BOS Member)

  
Dr. P. Venkata Rao  
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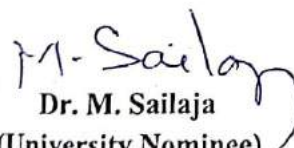
  
Mr. S. Vamshi Krishna  
(BOS Member)

  
Mr. Biswaranjan Barik  
(BOS Member)

  
Mr. G. V. Vinod  
(BOS Member)

I YEAR I SEMESTER

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	19199101	BSC	Mathematics-I	3	0	0	3	30	70	100
2	19199102	HSMC	Communicative English-I	3	0	0	3	30	70	100
3	19199193	MC	Environmental Studies	2	0	0	0	100*	-	-
4	19199104	BSC	Engineering Physics	3	0	0	3	30	70	100
5	19195105	ESC	Problem Solving & Programming in C	3	0	0	3	30	70	100
6	19193176	ESC	Engineering Graphics	1	0	3	2.5	30	70	100
7	19199111	HSMC	Communicative English Laboratory	0	0	3	1.5	50	50	100
8	19199112	BSC	Engineering Physics Laboratory	0	0	3	1.5	50	50	100
9	19195113	ESC	Problem Solving & Programming Laboratory with C	0	0	3	1.5	50	50	100
TOTAL				17	0	9	19	400	500	900
BS 7.5	HS 4.5	MC 0	ES 7							


  
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I YEAR II SEMESTER

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	19199201	BSC	Mathematics-II	3	0	0	3	30	70	100
2	19199202	HSMC	Communicative English II	3	0	0	3	30	70	100
3	19199203	BSC	Engineering Chemistry	3	0	0	3	30	70	100
4	19199294	MC	Professional Ethics & Human Values	2	0	0	0	100*	-	-
5	19192205	ESC	Basic Electrical & Electronics Engineering	3	0	0	3	30	70	100
6	19195206	ESC	Python programming	3	0	0	3	30	70	100
7	19199211	HSMC	Communicative English Laboratory -II	0	0	3	1.5	50	50	100
8	19199212	BSC	Engineering Chemistry Laboratory	0	0	3	1.5	50	50	100
9	19192213	ESC	Basic Electrical & Electronics Engineering Lab	0	0	3	1.5	50	50	100
10	19195214	ESC	Python programming Lab	0	0	3	1.5	50	50	100
TOTAL				17	0	12	21	450	550	1000
BS 7.5	HSMC 4.5	ES 9	MC 0							

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**II YEAR I SEMESTER**

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		BSC	Complex Variables Transform Techniques	0	3	0	3	30	70	100
2		ESC	Network Analysis	3	0	0	3	30	70	100
3		PC	Electronic Devices and Circuits	3	0	0	3	30	70	100
4		PC	Switching Theory and Logic Design	3	0	0	3	30	70	100
5		PC	Signals and systems	3	0	0	3	30	70	100
6		PC	Electromagnetic Waves & Transmission Lines	3	0	0	3	30	70	100
7		MC	Design Thinking & Product Innovation	2	0	0	0	100*	-	-
8		ESC	Network Analysis laboratory	0	0	3	1.5	50	50	100
9		PC	Electronic Devices and Circuits laboratory	0	0	3	1.5	50	50	100
<b>TOTAL</b>				<b>18</b>	<b>0</b>	<b>6</b>	<b>21</b>	<b>280</b>	<b>520</b>	<b>800</b>
BS	PC	ES								
3	13.5	4.5								

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

4 Years B.Tech. (Electronics and Communication Engineering) Course Structure: (2019-20)

## II YEAR II SEMESTER

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		BSC	Random Variable and Stochastic Process	3	0	0	3	30	70	100
2		OE	Open Elective-I Robotics Operating Systems Utilization of Electrical Energy Internet of Things Environment Pollution & Control Basic Automobile Engineering Elements of Mining Technology	3	0	0	3	30	70	100
3		PC	Electronic circuit Analysis	3	0	0	3	30	70	100
4		PC	Analog Communications	3	0	0	3	30	70	100
5		PC	Pulse and Digital Circuits	3	0	0	3	30	70	100
6		PC	Electronic circuit Analysis Laboratory	0	0	3	1.5	50	50	100
7		PC	Pulse and Digital Circuits Laboratory	0	0	3	1.5	50	50	100
8		PC	Analog Communications Laboratory	0	0	3	1.5	50	50	100
9		PR	Community Service Oriented Project	0	0	1	0.5	100	-	100
TOTAL				15	0	9	20	400	500	900
BS	PC	PR	OE							
3	13.5	0.5	3							

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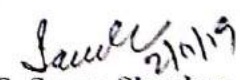


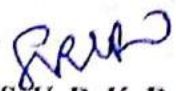
III YEAR I SEMESTER

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		HSMC	SOFT SKILLS - I	0	0	3	1.5	50	50	100
2		OE	OPEN ELECTIVE-II MEMS Information Security Energy Management Digital Image Processing Solid Waste Management Hybrid and Electrical Vehicles Disasters Management in Mining	3	0	0	3	30	70	100
3		PC	Linear & Digital IC Applications	3	0	0	3	30	70	100
4		PC	Digital Communication	3	0	0	3	30	70	100
5		PC	Antenna and Wave Propagation	3	0	0	3	30	70	100
6		PE	PROFESSIONAL ELECTIVE-I Electronic Measurement and Instrumentation Computer Architecture and Organization Information Theory and Coding Artificial Neural Networks and Fuzzy Logic	3	0	0	3	30	70	100


  
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**III YEAR I SEMESTER**

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
7		MC	Constitution of India	2	0	0	0	100*	-	-
8		PC	Linear IC Applications Laboratory	0	0	3	1.5	50	50	100
9		PC	DSD& Digital IC Applications Laboratory	0	0	3	1.5	50	50	100
10		PC	Digital Communications Laboratory	0	0	3	1.5	50	50	100
11		PR	Mini Project - I	0	0	4	2	100*	-	-
<b>TOTAL</b>				17	0	14	2 3	550	550	1100
OE	PC	PR	HS	PE						
3	13.5	2	1.5	3						

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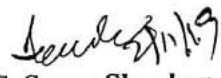
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**III YEAR II SEMESTER**

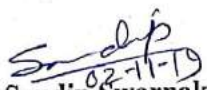
Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		OE	OPEN ELECTIVE - 3 Nano Technology Human Computer Interaction Renewable Energy Resources Data Communication Global Environment: Problems & Policies Modern Vehicle Technology Remote Sensing & GIS in Mining	3	0	0	3	30	70	100
2		PC	Computer Networks	3	0	0	3	30	70	100
3		PC	Microprocessors and Microcontrollers	3	0	0	3	30	70	100
4		PC	Digital Signal Processing	3	0	0	3	30	70	100
5		PC	Microwave Engineering	3	0	0	3	30	70	100


  
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 Mr. G. Vinod  
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**IV YEAR I SEMESTER**

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		OE	OPEN ELECTIVE-IV MEFA Entrepreneurship Qualities for Engineers Principles of Management Financial Management for Engineers Operation Management Digital Marketing Total Quality Management Organizational Behavior Human Resource Management	3	0	0	3	30	70	100
2		PC	VLSI Design	3	0	0	3	30	70	100
3		PC	Optical Communication	3	0	0	3	30	70	100
4		PC	Digital Image Processing	3	0	0	3	30	70	100
5		MC	IPR & Patents	2	0	0	0	100*	-	-

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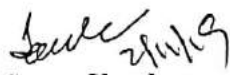
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**IV YEAR I SEMESTER**

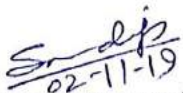
Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
6		PE	PROFESSIONAL ELECTIVE-III Bio Medical Instrumentation Embedded System Design Digital Signal Processors and Architecture Wireless Sensor Networks	3	0	0	3	30	70	100
7		PC	Microwave Engineering and Optical Communication Laboratory	0	0	3	1.5	50	50	100
8		PC	VLSI Laboratory	0	0	3	1.5	50	50	100
9		PR	Summer Internship / Mini Project II	-	-	-	4	100	-	100
<b>TOTAL</b>				<b>17</b>	<b>0</b>	<b>6</b>	<b>20</b>	<b>450</b>	<b>450</b>	<b>900</b>
OE.	PC	PR	PE							
3	12	2	3							


  
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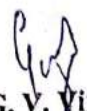
  
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IV YEAR II SEMESTER

Sl. No.	Course Code	Course Category	Subject Title	Periods per week			C	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1		PE	PROFESSIONAL ELECTIVE-IV EMI & EMC Digital IC Design Speech Processing Network Security and Cryptography	3	0	0	3	30	70	100
2		PE	PROFESSIONAL ELECTIVE-V Radar System Engineering Low Power VLSI Design Multimedia Communication Internet of Things	3	0	0	3	30	70	100
3		PR	PROJECT	0	0	18	9	80	120	200
TOTAL				6	0	16	15	140	260	400
PE 6		PR 9								

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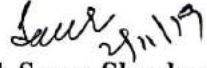
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**PROFESSIONAL ELECTIVES**

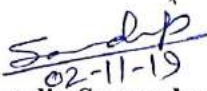
Professional Electives	Communication	VLSI & Embedded Systems	Signal Processing	Networking
Elective I	Electronic Measurement and Instrumentation	Computer Architecture & Organization	Information theory and Coding	Artificial Neural Networks and Fuzzy Logic
Elective II	Wireless and Mobile Communication	Digital system design using Verilog	Control Systems	Telecommunication Switching Systems and Networks
Elective III	Bio Medical Instrumentation	Embedded System Design	Digital Signal Processors and Architecture	Wireless Sensor Networks
Elective IV	EMI & EMC	Digital IC Design	Speech Processing	Network Security and Cryptography
Elective V	Radar system Engineering	Low Power VLSI Design	Multimedia Communication	Internet of Things

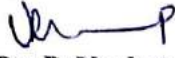
  
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
  
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OPEN ELECTIVE-I	OPEN ELECTIVE-II	OPEN ELECTIVE-III	OPEN ELECTIVE-IV
Mech - Robotics	Mech - MEMS	Mech - Nano Technology	MEFA
CSE- Operating Systems	CSE- Information Security	CSE - Human Computer Interaction	Entrepreneurship Qualities for Engineers
EEE- Utilization of Electrical Energy	EEE - Energy management	EEE - Renewable Energy Resources	Principles of Management
ECE- Internet of Things	ECE - Digital Image Processing	ECE - Data Communication	Financial Management for Engineers
CE- Environmental Pollution & Control	CE - Solid Waste Management	CE - Global Environment: Problems & Policies	Operations management
AME - Basic Automobile Engineering	AME - Hybrid and Electric Vehicles	AME - Modern Vehicle Technology	Digital Marketing
MM - Elements of Mining Technology	MM - Disaster Management in Mining	MM- Remote Sensing & GIS in Mining	Total Quality Management
			Organizational Behavior
			Human Resource Management

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