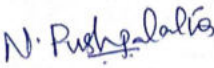


**II B. Tech – III Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	BSC	20ABS9912	Transform Techniques and Complex Variables	3	0	0	3	30	70	100
2	PCC	20APC0401	Electronic Devices and Circuits	3	0	0	3	30	70	100
3	PCC	20APC0402	Switching Theory and Logic Design	3	0	0	3	30	70	100
4	PCC	20APC0403	Signals and Systems	3	0	0	3	30	70	100
5	HSS	20AHSMB01	Managerial Economics and Financial Analysis	3	0	0	3	30	70	100
6	PCCL	20APC0404	Electronic Devices and Circuits Laboratory	0	0	3	1.5	30	70	100
7	PCCL	20APC0405	Signals and Systems Laboratory	0	0	3	1.5	30	70	100
8	PCCL	20APC0406	Switching Theory and Logic Design Laboratory	0	0	3	1.5	30	70	100
9	SOC	20ASC0401	Electronic Circuit Design	1	0	2	2	100	-	100
10	MC	20AMC9901	Biology for Engineers	2	0	0	0	30		30
<b>TOTAL</b>							<b>21.5</b>	<b>370</b>	<b>560</b>	<b>930</b>

**II B. Tech – IV Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	ESC	20AES0509	Basics of Python Programming	3	0	0	3	30	70	100
2	PCC	20APC0407	Probability Theory and Stochastic Process	3	0	0	3	30	70	100
3	PCC	20APC0408	Electromagnetic Theory and Transmission Lines	3	0	0	3	30	70	100
4	PCC	20APC0409	Analog Communication Systems	3	0	0	3	30	70	100
5	PCC	20APC0410	Electronic Circuit Analysis	3	0	0	3	30	70	100
6	ESCL	20AES0510	Basics of Python Programming Laboratory	0	0	3	1.5	30	70	100
7	PCCL	20APC0411	Analog Communication Systems Laboratory	0	0	3	1.5	30	70	100
8	PCCL	20APC0412	Electronic Circuit Analysis Laboratory	0	0	3	1.5	30	70	100
9	SOC	20ASC0402	Internet of Things	1	0	2	2	100	-	100
10	HSC	20AHS9905	Universal Human Values	2	1	0	3	30	70	100
<b>TOTAL</b>							<b>24.5</b>	<b>370</b>	<b>630</b>	<b>1000</b>
<b>Community service Project with credits</b>										
(To visit the selected community to conduct survey (Socio-economic & domain survey) and conduct sensitization/awareness program/activities at the end of IV- semester before commencement of V-semester and complete immersion programme also during V-Semester and submit report in V - semester. Assessment will be done at the end of V-Semester)										
<b>Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>100</b>		<b>100</b>

  
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**ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES, TIRUPATI  
(AUTONOMOUS)  
AK20-REGULATIONS  
ELECTRONICS and COMMUNICATION ENGINEERING (ECE)  
(Effective for the batches admitted in 2020-21)**

**INDUCTION PROGRAM (3 weeks duration)**

- ❖ Physical activity
- ❖ Creative Arts
- ❖ Universal Human Values
- ❖ Literary
- ❖ Proficiency Modules
- ❖ Lectures by Eminent People
- ❖ Visits to local Areas
- ❖ Familiarization to Dept./Branch and Innovations

**I B. Tech – I Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	BSC	20ABS9901	Algebra and Calculus	3	0	0	3	30	70	100
2	BSC	20ABS9902	Applied Physics	3	0	0	3	30	70	100
3	HSMC	20AHS9901	Communicative English	3	0	0	3	30	70	100
4	ESC	20AES0304	Engineering Workshop Practice	1	0	4	3	30	70	100
5	ESC	20AES0501	Problem Solving and Programming	3	0	0	3	30	70	100
6	HSMC	20AHS9902	Communicative English Laboratory	0	0	2	1.5	30	70	100
7	BSCL	20ABS9907	Applied Physics Laboratory	0	0	3	1.5	30	70	100
8	ESC	20AES0503	Problem Solving and Programming Laboratory	0	0	3	1.5	30	70	100
<b>TOTAL</b>							<b>19.5</b>	<b>240</b>	<b>560</b>	<b>800</b>

**I B. Tech – II Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	BSC	20ABS9906	Differential Equations and Vector Calculus	3	0	0	3	30	70	100
2	BSC	20ABS9904	Chemistry	3	0	0	3	30	70	100
3	ESC	20AES0201	Network Theory	3	0	0	3	30	70	100
4	ESC	20AES0502	Data Structures	3	0	0	3	30	70	100
5	ESC	20AES0301	Engineering Graphics	1	0	4	3	30	70	100
6	ESC	20AES0203	Network Theory Laboratory	0	0	3	1.5	30	70	100
7	BSC	20ABS9909	Chemistry Laboratory	0	0	3	1.5	30	70	100
8	ESC	20AES0504	Data Structures Laboratory	0	0	3	1.5	30	70	100
9	MC	20AMC9902	Constitution of India	3	0	0	0	30		30
<b>TOTAL</b>							<b>19.5</b>	<b>270</b>	<b>560</b>	<b>830</b>

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**III B. Tech – V Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	PCC	20APC0413	Antennas and Wave Propagation	3	0	0	3	30	70	100
2	PCC	20APC0414	Digital Communication Systems	3	0	0	3	30	70	100
3	PCC	20APC0415	Integrated Circuits and Applications	3	0	0	3	30	70	100
4	OEC/JOE	20APC0515	Operating Systems	3	0	0	3	30	70	100
		20AOE0202	Programmable Logic Controllers							
		20APC0213	Control Systems							
5	PEC	20APE0401	VLSI Design	3	0	0	3	30	70	100
		20APE0402	Computer Organization							
		20APE0403	Digital System Design							
6	PCCL	20APC0416	Digital Communication Systems Laboratory	0	0	3	1.5	30	70	100
7	PCCL	20APC0417	Integrated Circuits and Applications Laboratory	0	0	3	1.5	30	70	100
8	SAC/SSC	20AHE9902	Principles of Effective Public Speaking	1	0	2	2	100	-	100
9	MC	20AMC9904	Professional Ethics and Human Values	3	0	0	0	30	-	30
10	CSP	20CSP0401	Community Service Project	0	0	0	1.5	100	-	100
<b>TOTAL</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>21.5</b>	<b>440</b>	<b>490</b>	<b>930</b>
<b>Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>100</b>		<b>100</b>

**III B. Tech –VI Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)			
				L	T	P		CIE	SEE	Total	
<b>Theory</b>											
1	PCC	20APC0418	Microprocessors and Microcontrollers	3	0	0	3	30	70	100	
2	PCC	20APC0419	Digital Signal Processing	3	0	0	3	30	70	100	
3	PCC	20APC0420	Microwave and Optical Communications	3	0	0	3	30	70	100	
4	PEC	20APE0404	Low Power VLSI Circuits and Systems	3	0	0	3	30	70	100	
		20APE0405	MEMS and Microsystems								
		20APE0406	Industrial Electronics								
5	OEC/JOE	20AOE0518	Open Elective (Inter disciplinary) (MOOC-I)	0	0	0	3	100	-	100	
		20AOE0516									An Introduction to Artificial Intelligence
		20AOE0201									R Programming Neural Networks and Fuzzy Logic
6	PCCL	20APC0421	Microprocessors and Microcontrollers Laboratory	0	0	3	1.5	30	70	100	
7	PCCL	20APC0422	Digital Signal Processing Laboratory	0	0	3	1.5	30	70	100	
8	PCCL	20APC0423	Microwave and Optical Communications Laboratory	0	0	3	1.5	30	70	100	
9	SAC/SSC	20ASA0501	Basics of Cloud Computing	1	0	2	2	100	-	100	
10	MC	20AMC9903	Environmental Studies	2	0	0	0	30	-	30	
<b>TOTAL</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>21.5</b>	<b>340</b>	<b>490</b>	<b>930</b>	
<b>Internship 2 Months (Mandatory) during summer vacation</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>100</b>		<b>100</b>	
<b>Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>100</b>		<b>100</b>	

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**IV B. Tech – VII Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)						
				L	T	P		CIE	SEE	Total				
<b>Theory</b>														
1	PC	20APC0424	Pattern Recognition and Applications	3	0	0	3	30	70	100				
2	PEC	20APE0407	Digital Image Processing	3	0	0	3	30	70	100				
		20APE0408	Adaptive Signal Processing											
		20APE0409	Television Engineering											
3	PEC	20APE0410	Professional Elective (MOOC-II) Electronic Measurements and Instrumentation	0	0	0	3			100				
		20APE0411	Electronic Systems for Cancer diagnosis											
		20APE0412	RF Integrated Circuits											
4	PEC	20APE0413	Radar Systems	3	0	0	3	30	70	100				
		20APE0414	Satellite Communications											
		20APE0415	Wireless Communications											
5	OEC/JOE	20APC0510	Computer Networks	2	0	2	3	30	70	100				
		20APE0417	Sensors and IOT											
		20AOE0402	Bio Medical Instrumentation											
6	OEC/JOE	20APC0512	Data Base Management Systems	2	0	2	3	30	70	100				
		20APE0416	Computer System Architecture											
		20AOE0301	Robotics											
7	SAC/SSC	20ASA0401	Embedded Systems	1	0	2	2	100	-	100				
<b>Industrial/Research Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)</b>								0	0	0	3	100	-	100
<b>TOTAL</b>											23	350	350	800
<b>Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)</b>				4	0	0	4	100		100				

**IV B. Tech – VIII Semester**

S. No.	Category	Course Code	Course Title	Hours per week			Credits	Scheme of Examination (Max. Marks)		
				L	T	P		CIE	SEE	Total
<b>Theory</b>										
1	MP	20APR0401	Project work	0	0	0	12	60	140	200
<b>TOTAL</b>							12	60	140	200
<b>Grand Total</b>							163	2440	3780	6420

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