



# SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

(Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu)

(Accredited by NBA for Civil, EEE, Mech., ECE & CSE)

Accredited by NAAC with 'A' Grade)

Puttur -517583, Chittoor District, A.P. (India)

## Structure of the Program Indicating Courses and Credits/Electives

S.No	Name of Programme	Curriculum	Page No
1	B.Tech - Civil Engineering (CIV)	R20	3
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		R18	8
		R16	14
2	B.Tech - Electrical and Electronics Engineering (EEE)	R20	18
		R19	20
		R18	23
		R16	28
3	B.Tech - Mechanical Engineering (MEC)	R20	32
		R19	34
		R18	36
		R16	43
4	B.Tech - Electronics and Communication Engineering (ECE)	R20	47
		R19	49
		R18	52
		R16	56
5	B.Tech - Computer Science and Engineering (CSE)	R20	60
		R19	62
		R18	65
		R16	69
6	B.Tech - Computer Science and Information Technology (CIT)	R20	73
		R19	75
		R18	78
		R16	83
7	B.Tech - Agricultural Engineering (AGR)	R20	88
		R19	90
		R18	93
		R16	99
8	B.Tech - Computer Science and Engineering (Artificial Intelligence and Machine Learning - CSM)	R20	104
9	B.Tech - Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology - CIC)	R20	106
10	M.Tech - Structural Engineering (SE)	R20	108
		R19	111
		R18	114
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11	M.Tech - Control Systems (CS)	R20	118
		R19	121
		R18	124
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12	M.Tech - Power Electronics (PE)	R20	128
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		R18	134
		R16	137
13	M.Tech- Mechanical Engineering (CAD/CAM)	R20	138
		R19	141
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		R16	147
14	M.Tech - Thermal Engineering (TE)	R20	148
		R19	150
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15	M.Tech - Digital Electronics and Communication Systems (DECS)	R20	157
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		R18	161
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16	M.Tech - Embedded Systems (ES)	R20	165
		R19	167
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17	M.Tech - VLSI	R20	173
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		R18	179
		R16	182
18	M.Tech - Computer Science and Engineering (CSE)	R20	183
		R19	185
		R18	187
		R16	189
19	Mater of Business Administration (MBA)	R20	190
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20	Master of Computer Applications (MCA)	R20	202
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		R18	207
		R16	210

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
**(Autonomous)**  
**Department of Civil Engineering**  
**Course Structure**

**I YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	20HS0830	Algebra and Calculus	3	-	-	3
2	20HS0848	Engineering Physics	3	-	-	3
3	20ME0351	Basic Electrical and Mechanical Engineering	3	-	-	3
4	20CS0501	C Programming and Data Structures	3	-	-	3
5	20CE0101	Engineering Materials	3	-	-	3
6	20HS0850	Engineering Physics Lab	-	-	3	1.5
7	20ME0352	Basic Electrical and Mechanical Engineering Lab	-	-	3	1.5
8	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
<b>Contact periods / week</b>			15	-	9	<b>19.5</b>
			Total/Week		<b>24</b>	

**I YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	20HS0831	Differential Equations and Complex Analysis	3	-	-	3
2	20HS0804	Engineering Chemistry	3	-	-	3
3	20HS0810	Communicative English	3	-	-	3
4	20ME0301	Engineering Graphics	1	-	4	3
5	20CE0102	Engineering Mechanics	3	-	-	3
6	20HS0805	Engineering Chemistry Lab	-	-	3	1.5
7	20HS0811	Communicative English Lab	-	-	3	1.5
8	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Mandatory Course</b>						
9	20HS0816	Indian Constitution	2	-	-	0
<b>Contact periods / week</b>			15	-	13	<b>19.5</b>
			Total/Week		<b>28</b>	

**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	20HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	20CE0103	Strength of Materials	3	-	-	3
3	20CE0104	Surveying & Geomatics	3	-	-	3
4	20CE0105	Building Technology	3	-	-	3
5	20CE0109	Fluid Mechanics	3	-	-	3
6	20CE0106	Strength of Materials Lab	-	-	3	1.5
7	20CE0107	Surveying Lab	-	-	3	1.5
8	20CE0108	Construction Materials Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CE0110	Geographic Information Systems	1	-	2	2
<b>Mandatory Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	-	-	0
<b>Contact Periods / Week</b>			18	-	11	<b>21.5</b>
			<b>Total/Week 29</b>			

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	20HS0833	Numerical Methods, Probability & Statistics	3	-	-	3
2	20CE0111	Hydraulic Engineering	3	-	-	3
3	20CE0113	Engineering Geology	3	-	-	3
4	20CE0114	Geotechnical Engineering	3	-	-	3
5	20CE0115	Structural Analysis	3	-	-	3
6	20CE0112	Fluid Mechanics & Hydraulic Machinery Lab	-	-	3	1.5
7	20CE0116	Engineering Geology Lab	-	-	3	1.5
8	20CE0117	Geotechnical Engineering lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CE0118	Computer Aided Drawing	1	-	2	2
<b>Internship 2 Months (Mandatory) during Summer Vacation</b>						
<b>Contact Periods / Week</b>			16		11	<b>21.5</b>
			<b>Total/Week 27</b>			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING**

<b>INDUCTION PROGRAM (MANDATORY)</b>	<b>3 WEEKS DURATION</b>
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (C.E)**

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19HS0848	Engineering Physics	3	1	-	4
2	19HS0830	Algebra and Calculus	3	-	-	3
3	19HS0810	Communicative English	3	-	-	3
4	19CE0101	Engineering Mechanics	2	1	-	3
5	19HS0852	Engineering Physics Lab	-	-	3	1.5
6	19HS0811	Communicative English Lab	-	-	3	1.5
7	19ME0301	Workshop Practice Lab	-	-	4	2
<b>Contact periods / week</b>			11	2	10	<b>18</b>
			Total/Week		<b>23</b>	

**I B. Tech. – II Semester (C.E)**

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19HS0802	Engineering Chemistry	3	1	-	4
2	19HS0831	Differential Equations and Vector Calculus	3	1	-	4
3	19CE0102	Strength of Materials – I	3	-	-	3
4	19CS0501	Python Programming	3	-	-	3
5	19ME0302	Engineering Graphics	1	-	4	3
6	19HS0806	Engineering Chemistry Lab	-	-	3	1.5
7	19CS0502	Python Programming Lab	-	-	3	1.5
<b>Audit Course</b>						
8	19HS0816	Indian Constitution	3	-	-	-
<b>Contact periods / week</b>			16	2	10	<b>20</b>
			Total/Week		<b>28</b>	

## II B. Tech. – I Semester (C.E)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19ME0345	Basic Electrical & Mechanical Engineering	3	-	-	3
2	19CE0103	Strength of Materials - II	3	1	-	4
3	19CE0104	Surveying & Geomatics	3	-	-	3
4	19CE0105	Building Materials & Construction	3	-	-	3
<b>Open Elective – I</b>						
5	19EE0238	Generation of Energy through Waste	3	-	-	3
	19ME0349	Fundamentals of Mechanical Engineering				
	19EC0448	Introduction to Communication Systems				
	19CS0550	Relational Database Management System				
	19HS0813	Management Science				
6	19CE0106	Strength of Materials Lab	-	-	3	1.5
7	19CE0107	Surveying Lab	-	-	3	1.5
8	19CE0108	Computer Aided Drawing Lab	-	-	2	1.0
<b>Audit Course</b>						
9	19HS0805	Environmental Science	3	-	-	-
<b>Contact periods / week</b>			18	1	8	<b>20</b>
			Total/Week <b>27</b>			

## II B. Tech. – II Semester (C.E)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19HS0833	Numerical Methods, Probability & Statistics	4	-	-	4
2	19CE0109	Fluid Mechanics	3	-	-	3
3	19CE0110	Engineering Geology	3	-	-	3
4	19CE0111	Structural Analysis	3	-	-	3
<b>Open Elective - II</b>						
5	19EE0233	Industrial Instrumentation	3	-	-	3
	19ME0350	Mechanical Measurements & Control Systems				
	19EC0449	Element of Embedded Systems				
	19CS0551	Java Programming				
	19HS0814	Intellectual Property Rights				
6	19CE0112	Fluid Mechanics & Hydraulic Machinery Lab	-	-	3	1.5
7	19CE0113	Engineering Geology Lab	-	-	3	1.5
8	19CE0114	GIS Lab	-	-	2	1.0
<b>Audit Course</b>						
9	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
<b>Contact periods / week</b>			18	1	8	<b>20</b>
			Total/Week <b>27</b>			

## III B. Tech. – I Semester (C.E)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19CE0115	Estimation, Costing and Valuation	3	1	-	4
2	19CE0116	Hydraulic Engineering	3	-	-	3
3	19CE0117	Geotechnical Engineering	3	-	-	3
4	19CE0118	Transportation Engineering	3	-	-	3
5	<b>Open Elective – III</b>		3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19ME0321	Non-Conventional Energy Resources				
	19EC0450	Introduction to IOT				
	19CS0545	Software Development & Testing				
19HS0861	Business Ethics					
6	19CE0119	Geotechnical Engineering Lab	-	-	3	1.5
7	19CE0120	Concrete & Highway Materials Lab	-	-	3	1.5
8	19CE0121	Surveying Camp ( 2 Weeks)	-	-	-	1.0
<b>Audit Course</b>						
9	19HS0858	Human Values and Professional Ethics	3	-	-	-
<b>Contact periods / week</b>			18	1	6	<b>20</b>
			Total/Week		<b>25</b>	

## III B. Tech. – II Semester (C.E)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19CE0122	Structural Design	3	1	-	4
2	19CE0123	Hydrology & Water Resources Engineering	3	-	-	3
3	19CE0124	Construction Project Management	3	-	-	3
4	19CE0125	Environmental Engineering	3	-	-	3
5	<b>Open Elective – IV</b>		3	-	-	3
	19EE0231	Neural Networks and Fuzzy Logic				
	19ME0353	Computer Aided Process Planning				
	19EC0451	MATLAB Programming				
	19CS0546	Introduction to Cyber Security				
19HS0862	Strategic Management					
6	19CE0126	Environmental Engineering Lab	-	-	3	1.5
7	19CE0127	Computer Aided Design Lab	-	-	3	1.5
8	19CE0128	Virtual Lab in Civil Engineering	-	-	2	1.0
<b>Audit Course</b>						
9	19HS0859	English for Corporate Communication Skills lab	-	-	2	-
<b>Contact periods / week</b>			15	1	10	<b>20</b>
			Total/Week		<b>26</b>	



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**(AUTONOMOUS)**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**I YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0848	Physics	3	1	-	4
2	18HS0830	Mathematics – I	3	-	-	3
3	18CS0501	Programming for Problem Solving	3	-	-	3
4	18CE0101	Engineering Mechanics	2	1	-	3
5	18HS0852	Physics Lab	-	-	3	1.5
6	18CS0503	Programming for Problem Solving Lab	-	-	3	1.5
7	18ME0301	Workshop Practice Lab	-	-	4	2
Induction Program (3weeks)			-	-	-	-
<b>Contact periods / week</b>			11	2	10	<b>18</b>
			Total/Week			

**I YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0801	Chemistry	3	1	-	4
2	18HS0831	Mathematics – II	3	1	-	4
3	18EE0240	Basic Electrical and Electronics Engineering	3	-	-	3
4	18HS0810	English	3	-	-	3
5	18ME0302	Engineering Graphics & Design	1	-	4	3
6	18HS0802	Chemistry Lab	-	-	3	1.5
7	18HS0811	English Lab	-	-	3	1.5
<b>Non – Credit Course</b>						
8	18HS0816	Indian Constitution	3	-	-	-
<b>Contact periods / week</b>			16	2	10	<b>20</b>
			Total/Week			



**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0803	Biology for Engineers	3	-	-	3
2	18HS0832	Transform & Discrete Mathematics	3	1	-	4
3	18CE0102	Introduction to Civil Engineering	3	-	-	3
4	18CE0103	Introduction to Solid Mechanics	3	-	-	3
5	18CE0104	Introduction to Fluid Mechanics	3	-	-	3
6	18CE0105	Solid Mechanics Lab	-	-	3	1.5
7	18CE0106	Fluid Mechanics Lab	-	-	3	1.5
8	18CE0107	Computer Aided Building Drawing	-	-	2	1
<b>Non – Credit Course</b>						
9	18HS0804	Environmental Sciences	3	-	-	-
<b>Contact Periods / Week</b>			18	1	8	<b>20</b>
			<b>Total/Week</b>		<b>27</b>	

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18ME0346	Mechanical Engineering	3	-	-	3
2	18CE0108	Engineering Geology	3	-	-	3
3	18CE0109	Surveying & Geomatics	3	-	-	3
4	18CE0110	Materials, Testing & Evaluation	3	1	-	4
5	18CE0111	Mechanics of Solids	3	-	-	3
6	18CE0112	Engineering Geology Lab	-	-	3	1.5
7	18CE0113	Surveying Lab – I	-	-	3	1.5
<b>Credit Course</b>						
8	COE – I	Comprehensive Online Exam – 1	-	-	-	1
<b>Non – Credit Course</b>						
9	18HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
<b>Contact Periods / Week</b>			18	1	6	<b>20</b>
			<b>Total/Week</b>		<b>25</b>	

**III YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18CE0114	Hydraulic Engineering	3	-	-	3
2	18CE0115	Structural Design	3	1	-	4
3	18CE0116	Geotechnical Engineering	3	-	-	3
4	18CE0117	Hydrology & Water Resources Engineering	3	-	-	3
5	18CE0118	Estimation, Costing and Valuation	3	-	-	3
6	18CE0119	Geotechnical Engineering Lab	-	-	3	1.5
7	18CE0120	Construction Materials Lab	-	-	3	1.5
8	18CE0121	Surveying Lab – II	-	-	2	1
<b>Non – Credit Course</b>						
9	18HS0842	Aptitude Practices	3	-	-	-
<b>Contact Periods / Week</b>			18	1	8	<b>20</b>
			Total/Week <b>27</b>			

**III YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18CE0122	Construction Project Management	3	-	-	3
2	18CE0123	Environmental Engineering	3	-	-	3
3	18CE0124	Transportation Engineering	3	-	-	3
4	<b>Professional Elective Course (PEC) – I</b>		3	-	-	3
	18CE0133	Foundation Engineering				
	18CE0134	Water Technology				
	18CE0135	Maintenance & Rehabilitation of Structures				
5	<b>Open Elective – I</b>		3	-	-	3
	18EE0234	Industrial Instrumentation				
	18ME0307	Non-Conventional Energy Resources				
	18EC0449	Introduction to IOT				
	18CS0517	Python Programming				
	18HS0814	Intellectual Property Rights				
6	18CE0125	Transportation Engineering Lab	-	-	2	1
7	18CE0126	Environmental Engineering Lab	-	-	2	1
8	18CE0130	Mini Project	-	-	-	2
<b>Credit Course</b>						
9	COE – II	Comprehensive Online Exam – 2	-	-	-	1
<b>Non – Credit Course</b>						
10	18HS0859	English for Corporate Communication skills lab	-	-	2	-
<b>Contact Periods / Week</b>			15	-	6	<b>20</b>
			Total/Week			

**IV YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	18CE0136	Concrete Technology	3	-	-	3
3	<b>Professional Elective Course (PEC) – II</b>					
	18CE0137	Finite Elements Methods	3	-	-	3
	18CE0138	Fundamentals of Urban Planning				
	18CE0139	Traffic Engineering and Management				
4	<b>Professional Elective Course (PEC) – III</b>					
	18CE0140	Advanced Structural Design	3	-	-	3
	18CE0141	Environmental Impact Assessment & Management				
	18CE0142	Airport Planning and Design				
5	<b>Professional Elective Course (PEC) – IV</b>					
	18CE0143	Prestressed Concrete	3	-	-	3
	18CE0144	Ground Improvement Techniques				
	18CE0145	Design & Drawing of Irrigation Structures				
6	<b>Open Elective – II</b>					
	18EE0236	Solar Photovoltaic Systems	3	-	-	3
	18ME0353	Computer Aided Process Planning				
	18EC0450	MATLAB Programming				
	18CS0544	Software Development & Testing				
	18HS0815	Entrepreneurship Development				
8	18CE0128	Computer Aided Design Lab	-	-	3	1.5
9	18CE0129	Civil Engineering Lab (Virtual Lab)	-	-	3	1.5
10	18CE0131	Project Phase – I			4	2
<b>Contact Periods / Week</b>			18	-	10	<b>23</b>
			Total/Week		<b>28</b>	

**IV YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1		MOOC – I	3	-	-	3
2		MOOC – II	3	-	-	3
3	18CE0132	Project Phase – II	-	-	22	11
Contact Periods / Week			6	-	22	17
			Total/Week			

Note: L – Lecture hours, T – Tutorial, P – Practical, Drg. – Drawing, C – Credits

Year	I Year		II Year		III Year		IV Year		Total
Semester	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	
Credits	18	20	20	20	20	20	23	17	158

**Total Credits: 158**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**Bachelor of Technology**  
**Department of Civil Engineering**

**I B. Tech. – I Semester (CE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics – I	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16HS606	Human Values & Professional Ethics	3	-	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16CS502	Computer Programming Lab	-	-	4	2
8.	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			<b>15</b>	<b>3</b>	<b>12</b>	<b>21</b>
			Total/Week 30			

**I B. Tech. – II Semester (CE)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics – II	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16ME302	Engineering Graphics	-	-	6	3
5.	16CE101	Engineering Mechanics	3	1	-	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16CE102	Applied Mechanics Lab	-	-	4	2
Contact Periods / Week			<b>12</b>	<b>3</b>	<b>18</b>	<b>21</b>
			Total/Week 33			

## II B. Tech. – I Semester (CE)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics – III	3	1	-	3
2.	16EE209	Electrical & Mechanical Technology	3	1	-	3
3.	16CE103	Strength of Materials – I	3	1	-	3
4.	16CE105	Surveying	3	1	-	3
5.	16CE106	Fluid Mechanics	3	1	-	3
6.	16CE107	Building Materials & Construction	3	1	-	3
7.	16CE108	Surveying Lab – I	-	-	4	2
8.	16CE109	Strength of Materials Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10.	16CS503	Data Structures through C	3	-	-	-
Contact Periods / Week			<b>21</b>	<b>6</b>	<b>8</b>	<b>23</b>
			Total/Week <b>35</b>			

## II B. Tech. – II Semester (CE)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS613	Probability & Statistics	3	1	-	3
2.	16HS605	Environmental Studies	3	1	-	3
3.	16CE110	Building Planning & Drawing	3	1	-	3
4.	16CE111	Strength of Materials – II	3	1	-	3
5.	16CE113	Hydraulics & Hydraulic Machinery	3	1	-	3
6.	16CE114	Surveying Lab – II	-	-	4	2
7.	16CE115	Computer Aided Drawing Lab	-	-	4	2
8.	16CE116	Fluid Mechanics & Hydraulic Machinery Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact Periods / Week			<b>15</b>	<b>5</b>	<b>16</b>	<b>22</b>
			Total/Week <b>36</b>			

## III B.Tech– I Semester (C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16CE117	Structural Analysis – I	3	1	-	3
2.	16CE118	Concrete Technology	3	1	-	3
3.	16CE119	Design & Drawing of Reinforced Concrete Structures	3	1	-	3
4.	16CE120	Water Resources Engineering – I	3	1	-	3
5.	16CE121	Engineering Geology	3	1	-	3
6.	16CE122	Geotechnical Engineering – I	3	1	-	3
7.	16CE123	Concrete Technology Lab	-	-	4	2
8.	16CE124	Engineering Geology Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10.	16HS616	Aptitude Practice-I	3	-	-	-
Contact Periods / Week			21	6	08	<b>23</b>
			Total/Week 35			

## III B.Tech – II Semester (C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16CE125	Structural Analysis – II	3	1	-	3
2.	16CE126	Design & Drawing of Steel Structures	3	1	-	3
3.	16CE127	Geotechnical Engineering – II	3	1	-	3
4.	16CE128	Water Resources Engineering – II	3	1	-	3
5.	16CE129	Transportation Engineering– I	3	1	-	3
6.	16CE130	Geotechnical Engineering Lab	-	-	4	2
7.	16CE131	Transportation Engineering Lab	-	-	4	2
8.	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week 35			



## IV B.Tech – I Semester (C.E)

S.No	Course Code	Subject	L	T	P	C
1.	16MB750	Managerial Economics and Financial Analysis	3	-	-	3
2.	16CE132	Transportation Engineering – II	3	1	-	3
3.	16CE133	Environmental Engineering	3	1	-	3
4.	16CE134	Estimation, Costing and Valuation	3	1	-	3
5.	<b>Department Elective – I</b>		3	1	-	3
	16CE135	Finite Element Methods in Civil Engineering				
	16CE136	Remote Sensing & GIS				
	16CE137	Air Pollution & Management				
6.	<b>Open Elective</b>		3	-	-	3
	16EE239	Neural Networks & Fuzzy Logic				
	16ME313	Non-Conventional Energy Resources				
	16EC443	Mat lab Programming				
	16CS511	Database Management Systems				
	16MB752	Intellectual Property Rights				
7.	16CE138	Environmental Engineering Lab	-	-	4	2
8.	16CE139	Computer Aided Design Lab	-	-	4	2
Contact Periods / Week			18	4	8	22
			Total/Week 30			

## IV B.Tech – II Semester (C.E)

S.No	Course Code	Subject	L	T	P	C
1.	16CE140	Design & Drawing of Irrigation Structures	3	1	-	3
2.	<b>Department Elective – II</b>		3	1	-	3
	16CE141	Advanced Foundation Engineering				
	16CE142	Advanced Structural Design				
	16CE143	Water Resources Systems Planning & Management				
3.	<b>Department Elective – III</b>		3	1	-	3
	16CE144	Construction Technology and Project Management				
	16CE146	Ground Improvement Techniques				
	16CE147	Prestressed Concrete				
4.	<b>Department Elective – IV</b>		-	-	-	3
	MOOCS	MOOC courses-offered by SWAYAM/ NPTEL/ NISTE-suggested by the department(online courses)				
5.	16CE148	Seminar	--	--	04	2
6.	16CE149	Project	--	--	20	10
Contact Periods / Week			09	02	24	24
			Total/Week 35			

**Note:** \*L-Lecture hours, T-Tutorial, P-Practical, Drg: Drawing, C-Credit

## Total credits: 178

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
Semester	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
Credits	21	21	23	22	23	22	22	24	

## Department of Electrical and Electronics Engineering

INDUCTION PROGRAM (MANDATORY)	THREE WEEKS DURATION
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>•Physical activity</li> <li>•CreativeArts</li> <li>•Universal Human Values</li> <li>•Literary</li> <li>•ProficiencyModules</li> <li>•Lectures by EminentPeople</li> <li>•Visits to local Areas</li> <li>•Familiarization to Dept./Branch &amp; Innovations</li> </ul>

## I B. Tech. – I Semester (EEE)

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	20HS0830	Algebra and Calculus	3	0	0	3
2.	20HS0802	Applied Chemistry	3	0	0	3
3.	20HS0810	Communicative English	3	0	0	3
4.	20ME0353	Thermal and Fluid Engineering	3	0	0	3
5.	20ME0301	Engineering Graphics	1	0	4	3
6.	20HS0803	Applied Chemistry Lab	0	0	3	1.5
7.	20HS0811	Communicative English Lab	0	0	3	1.5
8.	20ME0354	Thermal and Fluid Engineering Lab	0	0	3	1.5
<b>Total credits</b>						<b>19.5</b>

## I B. Tech. – II Semester (EEE)

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	20HS0831	Differential Equations and Complex Analysis	3	0	0	3
2.	20HS0849	Applied Physics	3	0	0	3
3.	20CS0501	C Programming and Data Structures	3	0	0	3
4.	20EE0201	Fundamentals of Electrical Circuits	3	0	0	3
5.	20EC0402	Electronic Devices and Circuits	3	0	0	3
6.	20HS0851	Applied Physics Lab	0	0	3	1.5
7.	20CS0502	C Programming and Data Structures Lab	0	0	3	1.5
8.	20ME0302	Workshop practice Lab	0	0	3	1.5
9.	20HS0816	Indian Constitution	2	0	0	0
<b>Total credits</b>						<b>19.5</b>

## II B. Tech. – I Semester (EEE)

S.No.	Course Code	Subject	L	T	P	C
1.	20HS0832	Probability. Numerical Methods and Transforms	3	-	-	3
2.	20EC0446	Analog Electronic Circuits	3	-	-	3
3.	20EE0202	Electrical Machines-I	3	-	-	3
4.	20EE0203	Generation of Electrical Power	3	-	-	3
5.	20EE0204	Electromagnetic Fields	3	-	-	3
6.	20EC0447	Analog Electronic Circuits Lab	-	-	3	1.5
7.	20EE0205	Electrical Machines-I Lab	-	-	3	1.5
8.	20EE0206	Electrical circuits and Simulation Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9.	20EC0455	PCB Designing Lab	1	-	2	2
<b>Non Credit Course</b>						
10.	20HS0801	Environmental Science	2	-	-	0
Contact Periods/Week			18	-	11	<b>21.5</b>
			Total/Week <b>29</b>			

## II B. Tech. – II Semester (EEE)

S.No.	Course Code	Subject	L	T	P	C
1.	20EC0448	Digital Electronics	3	-	-	3
2.	20HS0815	Entrepreneurship Development	3	-	-	3
3.	20EE0208	Electrical Power Transmission Systems	3	-	-	3
4.	20EE0209	Power Electronics	3	-	-	3
5.	20EE0210	Electrical Machines –II	3	-	-	3
6.	20EC0449	Digital Electronics Lab	-	-	3	1.5
7.	20EE0211	Power Electronics Lab	-	-	3	1.5
8.	20EE0212	Electrical machines-II lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9.	20EE0213	Sensors Modelling and Simulation Lab (Virtual Lab)	1	-	2	2
Contact Periods/Week			16	-	11	<b>21.5</b>
			Total/Week <b>27</b>			

**\*Internship 2 Months (Mandatory) during summer vacation**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**Department of Electrical and Electronics Engineering**

<b>INDUCTION PROGRAM (MANDATORY)</b>	<b>3 WEEKS DURATION</b>
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (EEE)**

<b>S No.</b>	<b>Course code</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P/Drg</b>	<b>C</b>
1	19HS0801	Applied Chemistry	3	1	-	4
2	19HS0830	Algebra and Calculus	3	-	-	3
3	19HS0810	Communicative English	3	-	-	3
4	19ME0361	Thermal and Fluid Engineering	3	-	-	3
5	19HS0803	Applied Chemistry Lab	-	-	3	1.5
6	19HS0811	Communicative English Lab	-	-	3	1.5
7	19ME0301	Workshop Practice Lab	-	-	4	2
<b>Contact Periods/Week</b>			12	1	10	<b>18</b>
			<b>Total/Week</b>		<b>23</b>	

**I B. Tech. – II Semester (EEE)**

<b>S No.</b>	<b>Course code</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P/Drg</b>	<b>C</b>
1	19HS0849	Applied Physics	3	1	-	4
2	19HS0831	Differential Equations and vector Calculus	3	1	-	4
3	19ME0302	Engineering Graphics	1	-	4	3
4	19CS0501	Python Programming	3	-	-	3
5	19EE0201	Electrical circuits - I	3	-	-	3
6	19HS0853	Applied Physics Lab	-	-	3	1.5
7	19CS0502	Python Programming Lab	-	-	3	1.5
<b>Audit Course</b>						
8	19HS0816	Indian Constitution	3	-	-	-
<b>Contact Periods/Week</b>			16	2	10	<b>20</b>
			<b>Total/Week</b>		<b>28</b>	

**II B. Tech. – I Semester (EEE)**

S No.	Course code	Subject	L	T	P	C
1	19HS0832	Probability, Numerical Methods and Transforms	3	-	-	3
2	19EC0402	Electronic Devices and Circuits	3	-	-	3
3	19EE0202	Electrical circuits-II	3	-	-	3
4	19EE0203	Electrical Machines-I	3	-	-	3
<b>Open Elective-I</b>						
5	19CE0136	Water Technology	3	-	-	3
	19ME0349	Fundamentals of Mechanical Engineering				
	19EC0448	Introduction to Communication Systems				
	19CS0550	Relational Data Base Management Systems				
	19HS0813	Management Science				
6	19EC0405	Electronic Devices and Circuits Lab	-	-	3	1.5
7	19EE0204	Electrical Machines-I Lab	-	-	4	2
8	19EE0205	Electrical Circuits Lab			3	1.5
<b>Non-Credit Course</b>						
9	19HS0805	Environmental Science	3	-	-	0
<b>Contact Periods/Week</b>			18	-	10	<b>20</b>
			Total/Week <b>28</b>			

**II B. Tech. – II Semester (EEE)**

S No.	Course code	Subject	L	T	P	C
1	19EC0401	Switching Theory and Logic Design	3	-	-	3
2	19EC0446	Analog Electronic Circuits	3	-	-	3
3	19EE0207	Electromagnetic Fields	3	-	-	3
4	19EE0208	Electrical Machines-II	3	-	-	3
<b>Open Elective-II</b>						
5	19CE0143	Fundamentals of Urban Planning	3	-	-	3
	19ME0350	Mechanical Measurements & Control Systems				
	19EC0449	Elements of Embedded Systems				
	19CS0551	Java Programming				
	19HS0814	Intellectual Property Rights				
6	19EC0404	Switching Theory and Logic Design Lab	-	-	3	1.5
7	19EC0447	Analog Electronic Circuits Lab	-	-	3	1.5
8	19EE0209	Electrical Machines-II Lab	-	-	4	2
<b>Non-Credit Course</b>						
9	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	0
<b>Contact Periods/Week</b>			18	-	10	<b>20</b>
			Total/Week <b>28</b>			

## III B. Tech. – I Semester (EEE)

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	19EE0210	Power Electronics	3	-	-	3
2.	19EE0211	Electrical Power Generation & Transmission systems	3	-	-	3
3.	19EE0212	Control Systems	3	-	-	3
4.	19EE0213	Electrical Measurements	3	-	-	3
<b>Open Elective-III</b>						
5.	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19ME0321	Non-Conventional Energy Resources				
	19EC0450	Introduction to IOT				
	19CS0545	Software Development and Testing				
	19HS0861	Business Ethics				
6.	19EE0214	Power Electronics and Simulation Lab	-	-	4	2
7.	19EE0215	Control Systems and Simulation Lab	-	-	3	1.5
8.	19EE0216	Electrical Measurements Lab	-	-	3	1.5
Non -Credit Course						
9.	19HS0858	Human Values and Professional Ethics	3	-	-	0
Contact Periods / Week			18	0	10	20
			Total/Week 28			

## III B. Tech. – II Semester (EEE)

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	19EC0421	Microprocessors and Microcontrollers	3	-	-	3
2.	19EE0217	Power System Operation and Control	3	-	-	3
3.	19EE0218	Power System Analysis	3	-	-	3
4.	19EE0219	Switch Gear and Protection	3	-	-	3
<b>Open Elective-IV</b>						
5.	19CE0147	Project Planning and Control	3	-	-	3
	19ME0337	Mechatronics & Robotics				
	19EC0451	MATLAB Programming				
	19CS0546	Introduction to Cyber Security				
	19HS0862	Strategic Management				
6.	19EC0424	Microcontroller and its Applications Lab	-	-	3	1.5
7.	19EE0220	Power Systems and Simulation Lab	-	-	4	2
8.	19EE0221	Substation Automation Lab (Virtual Lab)	-	-	3	1.5
Non -Credit Courses						
9.	19HS0859	English for Corporate Communications	3	-	-	0
Contact Periods / Week			18	-	10	20
			Total/Week 28			

**Under Graduate (B.Tech.)  
Department of Electrical and Electronics Engineering (EEE)**

**I Year 1<sup>st</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18HS0830	Mathematics I	3	-	-	3
2	18HS0849	Physics	3	1	-	4
3	18CS0501	Programming for problem solving	3	-	-	3
4	18ME0348	Thermal and Fluid Engineering	3	-	-	3
5	18ME0301	Workshop practice Lab	-	-	4	2
6	18HS0852	Physics Lab	-	-	3	1.5
7	18CS0503	Programming for problem solving Lab	-	-	3	1.5
8		Induction Program (3 weeks)	-	-	-	
			12	1	10	
<b>Total</b>			<b>Total/week 23</b>			<b>18</b>

**I Year 2<sup>nd</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18HS0810	English	3	-	-	3
2	18HS0831	Mathematics II	3	1	-	4
3	18HS0801	Chemistry	3	1	-	4
4	18EE0201	Electrical circuits -I	3	-	-	3
5	18ME0302	Engineering Graphics & Design	1	-	4	3
6	18HS0811	English Lab	-	-	3	1.5
7	18HS0802	Chemistry Lab	-	-	3	1.5
<b>Non Credit course</b>						
8	18HS0816	Indian Constitution	3	-	-	0
			16	2	10	
<b>Total</b>			<b>Total/week 28</b>			<b>20</b>

II Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18HS0803	Biology for Engineers	2	1	-	3
2	18EE0202	Electrical circuits-II	3	-	-	3
3	18EC0443	Analog Electronic Circuits	3	-	-	3
4	18EE0203	Electromagnetic Fields	3	-	-	3
5	18EE0204	Electrical Machines -I	3	1	-	4
6	18EC0445	Analog Electronic Circuits lab	-	-	3	1.5
7	18ME0349	Thermal & Fluid Engineering Lab	-	-	3	1.5
8	18EE0205	Electrical circuits lab	-	-	2	1
<b>Non Credit course</b>						
9	18HS0804	Environmental Sciences	3	-	-	0
			17	2	8	
<b>Total</b>			<b>Total/week 27</b>			<b>20</b>

II Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EC0444	Digital Electronics	3	-	-	3
2	18HS0833	Probability & Statistics, Numerical Methods	3	1	-	4
3	18EE0206	Power Electronics	3	-	-	3
4	18EE0207	Electrical Machines II	3	-	-	3
5	18EC0403	Signals & Systems	3	-	-	3
6	18EE0208	Electrical Circuits Simulation Lab	-	-	3	1.5
7	18EE0209	Electrical Machines-I Lab	-	-	3	1.5
<b>Credit course</b>						
8	COE-I	Comprehensive Online Exam-I	-	-	-	1
<b>Non Credit course</b>						
9	18HS0817	Essence of Indian Traditional Knowledge	3	-	-	0
			18	1	6	
<b>Total</b>			<b>Total/week 25</b>			<b>20</b>



III Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	18EC0414	Digital signal processing	3	-	-	3
3	18EE0210	Power Systems-I	3	-	-	3
4	18EE0211	Control Systems	3	-	-	3
5	18EE0212	Electrical Measurements	3	-	-	3
6	18EE0213	Electrical Machines –II Lab	-	-	4	2
7	18EE0214	Control Systems Lab	-	-	3	1.5
8	18EE0215	Electrical Measurements Lab	-	-	3	1.5
<b>Noncredit course</b>						
9	18HS0842	Aptitude practices	3	-	-	-
			18	0	10	
<b>Total</b>			<b>Total/week 28</b>			<b>20</b>

III Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18HS0813	Management Science	3	-	-	3
2	18EC0420	Microprocessors and Microcontrollers	3	-	-	3
3	18EE0216	Power Systems – II	3	-	-	3
<b>Professional Elective Course(PEO)-I</b>						
4	18EE0221	Electrical Machine Design	3	-	-	3
	18EE0222	Digital Control Systems				
	18EE0223	Modern Control Theory				
<b>Open Elective-I</b>						
5	18CE0127	Elements of Road Traffic Safety	3	-	-	3
	18ME0307	Non-Conventional Energy Resources				
	18EC0449	Introduction to IOT				
	18CS0517	Python Programming				
	18HS0814	Intellectual Property Rights				
<b>Credit Course</b>						
6	COE-II	Comprehensive Online Examination-II	-	-	-	1
7	18EE0243	Internship (60 Hours)	-	-	-	2
8	18EE0217	Power Electronics and Drives Lab	-	-	2	1
9	18EE0218	Power Systems Lab	-	-	2	1
<b>Non Credit course</b>						
10	18HS0859	English for Corporate Communication Skills Lab	3	-	-	0
			18	0	4	
<b>Total</b>			<b>Total/week 22</b>			<b>20</b>

#### IV Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE0219	Electrical Distribution Systems	3	-	-	3
2	18EE0220	Utilization of Electrical Energy	3	-	-	3
<b>Professional Elective Course(PEC)- II</b>						
3	18EE0224	Power System Protection	3	-	-	3
	18EE0225	Electrical and Hybrid Vehicles				
	18EE0226	Electrical Energy Conservation and Auditing				
<b>Professional Elective Course (PEC)- III</b>						
4	18EE0227	Power Quality	3	-	-	3
	18EE0228	High Voltage Engineering				
	18EE0229	Wind and Solar Energy Systems				
<b>Professional Elective Course (PEC)- IV</b>						
5	18EE0230	HVDC and FACTS	3	-	-	3
	18EE0231	Neural Networks and Fuzzy Logic				
	18EE0232	Advanced Electrical Drives				
<b>Open Elective-II</b>						
6	18CE0146	Project Planning and Control	3	-	-	3
	18ME0353	Computer Aided Process Planning				
	18EC0450	MATLAB Programming				
	18CS0544	Software Development and Testing				
	18HS0815	Entrepreneurship Development				
7	18EC0422	Microcontroller and Applications Lab	-	-	2	1
8	18EE0233	Substation Automation Lab (Virtual Lab)	-	-	4	2
9	18EE0234	Project Phase-I	-	-	4	2
			18	-	10	
<b>Total:</b>			<b>Total/week: 28</b>			<b>23</b>

#### IV Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1		MOOC-I	3	-	-	3
2		MOOC-II	3	-	-	3
3	18EE0235	Project Phase-II	-	-	22	11
			6	-	22	
<b>Total:</b>			<b>Total/week 28</b>			<b>17</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**Bachelor of Technology**  
**Department of Electrical & Electronics Engineering**

**I B. Tech. – I Semester (E.E.E)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics-I	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16HS606	Human Values & Professional Ethics	3	-	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16CS502	Computer Programming Lab	-	-	4	2
8.	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			15	3	12	21
			Total/Week 30			

**I B. Tech. – II Semester (E.E.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics-II	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16ME302	Engineering Graphics	-	-	6	3
5.	16EE201	Electrical Circuits	3	1	-	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16EE202	Electrical Circuits Lab	-	-	4	2
Contact Periods / Week			12	3	18	21
			Total/Week 33			

**II B. Tech. – I Semester (E.E.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics-III	3	1	-	3
2.	16HS605	Environmental Studies	3	-	-	3
3.	16EE203	Network Analysis & synthesis	3	1	-	3
4.	16EC401	Basic Electronic Devices	3	1	-	3
5.	16EE210	Generation of Electric Power	3	1	-	3
6.	16EE211	Electrical Machines –I	3	1	-	3
7.	16EE204	Network Analysis & synthesis Lab	-	-	4	2
8.	16EC405	Basic Electronic Devices Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I				1
<b>Audit Course</b>						
10.	16CS503	Data Structures through C	3	-	-	-
Contact Periods / Week			<b>21</b>	<b>5</b>	<b>8</b>	<b>23</b>
			Total/Week <b>34</b>			

**II B. Tech. – II Semester (E.E.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS613	Probability & Statistics	3	1	-	3
2.	16CE112	Fluid Mechanics & Hydraulic Machinery	3	1	-	3
3.	16EE214	Electromagnetic Fields	3	1	-	3
4.	16EC411	Analog Electronic Circuits	3	1	-	3
5.	16EE215	Electrical Machines –II	3	1	-	3
6.	16EE217	Electrical Machines-I Lab	-	-	4	2
7.	16EC414	Analog Electronic Circuits Lab	-	-	4	2
8.	16CE116	Fluid Mechanics & Hydraulic Machinery Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II				1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week <b>35</b>			

**III B. Tech. – I Semester (EEE)**

S.No.	Course Code	Subject	L	T	P	C
11.	16EE216	Linear Control Systems	3	1	-	3
12.	16EE218	Electrical Power Transmission Systems	3	1	-	3
13.	16EE219	Power Electronics	3	1	-	3
14.	16EE220	Electrical Machines-III	3	1	-	3
15.	16EC402	Switching Theory and Logic Design	3	1	-	3
16.	16EC417	Linear IC Applications	3	1	-	3
17.	16EE221	Electrical Machines-II Lab	-	-	4	2
18.	16EE222	Control Systems and Simulation Lab	-	-	4	2
<b>Credit Course</b>						
19.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
20.	16HS616	Aptitude Practice-I	3	-	-	-
<b>Contact Periods / Week</b>			<b>21</b>	<b>6</b>	<b>8</b>	<b>23</b>
			<b>Total/Week 35</b>			

**III B. Tech. – II Semester (EEE)**

S.No.	Course Code	Subject	L	T	P	C
1.	16EE223	Power Semiconductor Drives	3	1	-	3
2.	16EE224	Electrical and Electronic Measurements	3	1	-	3
3.	16EE225	Switch Gear and Protection	3	1	-	3
4.	16EE226	Power System Analysis	3	1	-	3
5.	16EC423	Microprocessors & Microcontrollers	3	1	-	3
6.	16HS615	Advanced English Language and Communication Skills Lab.	-	-	4	2
7.	16EE227	Power Electronics and Simulation Lab	-	-	4	2
8.	16EC428	Microprocessors and Microcontrollers lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
<b>Contact Periods / Week</b>			<b>18</b>	<b>5</b>	<b>12</b>	<b>22</b>
			<b>Total/Week 35</b>			

## IV B. Tech. – I Semester (EEE)

S.No.	Course code	Subject	L	T	P	C
1	16EE228	Power System Operation and Control	3	1	-	3
2	16EE229	Electrical Distribution Systems	3	1	-	3
3	16EC422	Digital Signal Processing	3	1	-	3
4	16MB750	Managerial Economics and Financial Analysis	3	1	-	3
5.	16EE230 16EE231 16EE232	<b>Department Elective-I</b> Principles of Power Quality HVDC Transmission Systems Smart Grid technologies	3	1	-	3
6	16CE145 16ME313 16EC443 16CS511 16MB752	<b>Open Elective</b> Elements of Road Traffic Safety Non-Conventional Energy Resources Mat lab Programming Data Base Management Systems Intellectual Property Rights	3		-	3
7.	16EE233	Power Systems and Simulation Lab	-	-	4	2
8.	16EE234	Electrical Measurements Lab	-	-	4	2
<b>Contact Periods / Week</b>			<b>18</b>	<b>5</b>	<b>8</b>	<b>22</b>
			<b>Total/Week</b>			
			<b>31</b>			

## IV B.Tech. – II Semester (E.E.E)

S.No	Course code	Subject	L	T	P	C
1	16MB751	Entrepreneurship Development	3		-	3
2	16EE235 16EE236 16EE237	<b>Department Elective-II</b> Advanced Control Theory FACTS Controllers Soft Computing Techniques	3	1	-	3
3	16EE238 16EE240 16EE241	<b>Department Elective-III</b> Utilization of Electrical Power High Voltage Engineering Special Electrical Machines	3		-	3
4	<b>MOOCS</b>	<b>Department Elective-IV</b> MOOC Courses- Offered by Swayam/NPTEL/NISTE - suggested by the department(Online Courses)			-	3
5	16EE242	Seminar	-	4	-	2
6	16EE243	Project Work	-	-	20	10
<b>Contact Periods / Week</b>			<b>09</b>	<b>05</b>	<b>20</b>	<b>24</b>
			<b>Total/Week</b>			
			<b>34</b>			

**Note :** L – Lecture hour ; T – Tutorial ; Drg – Drawing ; P- Practicals

**Total credits:178**

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
Semester	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
Working hours	30	33	34	35	35	35	31	34	270
Credits	21	21	23	22	23	22	22	24	178



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
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**DEPARTMENT OF MECHANICAL ENGINEERING**

<b>Induction Program (Mandatory)</b>	<b>3 weeks duration</b>
<b>Induction program for students to be offered right at the start of the first year.</b>	<ul style="list-style-type: none"> <li>• <b>Physical activity</b></li> <li>• <b>Creative Arts</b></li> <li>• <b>Universal Human Values</b></li> <li>• <b>Literary</b></li> <li>• <b>Proficiency Modules</b></li> <li>• <b>Lectures by Eminent People</b></li> <li>• <b>Visits to local Areas</b></li> <li>• <b>Familiarization to Dept./Branch &amp; Innovations</b></li> </ul>

### I B. Tech. – I Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	20HS0830	Algebra and Calculus	3	-	-	3
2.	20HS0804	Engineering Chemistry	3	-	-	3
3.	20HS0810	Communicative English	3	-	-	3
4.	20EE0251	Basic Electrical & Electronics Engineering	3	-	-	3
5.	20ME0301	Engineering Graphics	1	-	4	3
6.	20HS0805	Engineering Chemistry Lab	-	-	3	1.5
7.	20HS0811	Communicative English Lab	-	-	3	1.5
8.	20EE0252	Basic Electrical & Electronics Engineering lab	-	-	3	1.5
Contact Periods / Week			13	-	13	19.5
			Total/Week 26			

### I B. Tech. – II Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	20HS0831	Differential Equations and Complex Analysis	3	-	-	3
2.	20HS0848	Engineering Physics	3	-	-	3
3.	20CS0501	C Programming and Data Structures	3	-	-	3
4.	20ME0303	Basic Thermodynamics	3	-	-	3
5.	20CE0163	Basics of Engineering Mechanics	3	-	-	3
6.	20HS0850	Engineering Physics Lab	-	-	3	1.5
7.	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
8.	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Mandatory Courses</b>						
9.	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			17	-	9	19.5
			Total/Week 26			



## II B. Tech. – I Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	20HS0833	Numerical Methods, Probability & Statistics	3	-	-	3
2.	20CE0160	Fluid Mechanics & Hydraulic Machinery	3	-	-	3
3.	20CE0164	Mechanics of Solids	3	-	-	3
4.	20ME0304	Kinematics of Machinery	3	-	-	3
5.	20ME0305	Thermal Engineering	3	-	-	3
6.	20CE0112	Fluid Mechanics & Hydraulic Machinery Lab	-	-	3	1.5
7.	20CE0106	Strength of Materials Lab	-	-	3	1.5
8.	20ME0306	Thermal Engineering Lab	-	-	3	1.5
<b>Skill oriented course*</b>						
9	20ME0365	Automobile Engineering Lab- I	1	-	2	2
<b>Mandatory Course</b>						
9.	20HS0801	Environmental Science	2	-	-	-
Contact Periods / Week			18	-	8	21.5
			Total/Week		26	

## II B. Tech. – II Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	20HS0815	Entrepreneurship Development	3	-	-	3
2.	20ME0307	CAD/CAM	3	-	-	3
3.	20ME0308	Manufacturing Processes	3	-	-	3
4.	20ME0309	Materials Science	3	-	-	3
5.	20ME0310	Theory of Machines	3	-	-	3
6.	20ME0311	Computer Aided Machine Drawing lab	-	-	3	1.5
7.	20ME0312	Manufacturing Processes Lab	-	-	3	1.5
8.	20ME0313	Materials Science Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9.	20ME0366	Computer Aided Modeling Lab- I	1	-	2	2
Contact Periods / Week			16	-	11	21.5
			Total/Week		27	
<b>Internship 2 Months (Mandatory) during summer vacation</b>						



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<b>INDUCTION PROGRAM (MANDATORY)</b>	<b>3 WEEKS DURATION</b>
<b>Induction program for students to be offered right at the start of the first year.</b>	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

### I B. Tech. – I Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19HS0810	Communicative English	3	-	-	3
2.	19HS0830	Algebra & Calculus	3	-	-	3
3.	19HS0850	Advanced Physics	3	1	-	4
4.	19CE0101	Engineering Mechanics	2	1	-	3
5.	19HS0811	Communicative English Lab	-	-	3	1.5
6.	19HS0854	Advanced Physics Lab	-	-	3	1.5
7.	19ME0301	Workshop Practice Lab	-	-	4	2.0
Contact Periods / Week			11	2	10	18
			Total/Week 23			

### I B. Tech. – II Semester

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19HS0831	Differential Equations and Vector Calculus	3	1	-	4
2.	19HS0802	Engineering Chemistry	3	1	-	4
3.	19CS0501	Python Programming	3	-	-	3
4.	19ME0302	Engineering Graphics	1	-	4	3
5.	19ME0303	Materials Engineering	3	-	-	3
6.	19HS0806	Engineering Chemistry Lab	-	-	3	1.5
7.	19CS0502	Python Programming Lab	-	-	3	1.5
<b>Non -Credit Courses</b>						
8.	19HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			16	2	10	20
			Total/Week 28			

**II B. Tech. – I Semester**

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19EE0240	Basic Electrical and Electronics Engineering	3	-	-	3
2.	19CE0150	Strength of Materials	3	1	-	4
3.	19CE0151	Fluid Mechanics & Hydraulics Machinery	2	1	-	3
4.	19ME0304	Kinematics of Machinery	2	1	-	3
<b>Open Elective-1</b>						
5.	19CE0136	Water Technology	3	-	-	3
	19EE0238	Generation of Energy through Waste				
	19EC0448	Introduction to Communication Systems				
	19CS0550	Relational Database Management System				
	19HS0813	Management Science				
6.	19EE0241	Basic Electrical and Electronics Engineering Lab	-	-	2	1.0
7.	19CE0106	Strength of Materials Lab	-	-	3	1.5
8.	19CE0112	Fluid Mechanics & Hydraulics Machinery Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	19HS0805	Environmental Science	3	-	-	-
Contact Periods / Week			16	3	8	20
			Total/Week 27			

**II B. Tech. – II Semester**

S. No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19HS0833	Numerical Methods, Probability & Statistics	4	-	-	4
2.	19ME0305	Engineering Thermodynamics	2	1	-	3
3.	19ME0306	Manufacturing Processes	3	-	-	3
4.	19ME0307	Theory of Machines	2	1	-	3
<b>Open Elective-II</b>						
5.	19CE0143	Fundamentals of Urban Planning	3	-	-	3
6.	19EE0233	Industrial Instrumentation				
7.	19EC0451	Elements of Embedded Systems				
8.	19CS0551	Java Programming				
9.	19HS0814	Intellectual Property Rights				
10.	19ME0308	Fuels Lab	-	-	3	1.5
11.	19ME0309	Manufacturing Processes Lab	-	-	3	1.5
12.	19ME0310	Computer Aided Machine Drawing Lab	-	-	2	1.0
<b>Non -Credit Course</b>						
13.	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			17	2	8	20
			Total/Week 27			

**III B.Tech– I Semester**

S.No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19ME0311	Design of Machine Elements-I	3	1	-	4
2.	19ME0312	Machine Tools	3	-	-	3
3.	19ME0313	CAD/CAM	3	-	-	3
4.	19ME0314	Thermal Engineering	3	-	-	3
<b>Open Elective-III</b>						
5.	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19EC0450	Introduction to IOT				
	19CS0545	Software Development & Testing				
	19HS0861	Business Ethics				
6.	19ME0315	Machine Tools lab	-	-	3	1.5
7.	19ME0316	Thermal Engineering- Lab	-	-	3	1.5
8.	19ME0317	Computer Aided Modeling & Analysis Lab	-	-	2	1.0
<b>Non -Credit Course</b>						
9.	19HS0859	English for Corporate Communications Skills Lab	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week 27			

**III B. Tech – II Semester**

S.No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	19ME0318	Design of Machine Elements-II	3	1	-	4
2.	19ME0319	Heat & Mass Transfer	3	-	-	3
3.	19ME0320	Metrology & Measurements	3	-	-	3
4.	19ME0321	Non-Conventional Energy Resources	3	-	-	3
<b>Open Elective-IV</b>						
5.	19CE0147	Project Planning and Control	3	-	-	3
	19EE0231	Neural Networks and Fuzzy Logic				
	19EC0451	MATLAB Programming				
	19CS0546	Introduction to Cyber Security				
	19HS0862	Strategic Management				
6.	19ME0322	Heat Transfer Lab	-	-	3	1.5
7.	19ME0323	Metrology and Measurements Lab	-	-	3	1.5
8.	19ME0324	Robot Programming Lab	-	-	2	1.0
<b>Non -Credit Course</b>						
9.	19HS0858	Human Values & Professional Ethics	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week 27			



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**I YEAR- I SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/ Drg	C
1.	18HS0830	Mathematics-I	3	-	-	3
2.	18HS0850	Physics	3	1	-	4
3.	18CE0101	Engineering Mechanics	2	1	-	3
4.	18CS0501	Programming for problem solving	3	-	-	3
5.	18HS0852	Physics Lab	-	-	3	1.5
6.	18CS0503	Programming for problem solving Lab	-	-	3	1.5
7.	18ME0301	Workshop Practice Lab	-	-	4	2
		Induction Program (3 weeks)	-	-	-	-
Contact Periods / Week			<b>11</b>	<b>2</b>	<b>10</b>	<b>18</b>
			<b>Total/Week 23</b>			

**I YEAR- II SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/ Drg	C
1.	18HS0810	English	3	-	-	3
2.	18HS0831	Mathematics-II	3	1	-	4
3.	18HS0801	Chemistry	3	1	-	4
4.	18ME0302	Engineering Graphics& Design	1	-	4	3
5.	18ME0303	Materials Engineering	3	-	-	3
6.	18HS0811	English Lab	-	-	3	1.5
7.	18HS0802	Chemistry Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
8.	18HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			<b>16</b>	<b>2</b>	<b>10</b>	<b>20</b>
			<b>Total/Week 28</b>			

**II YEAR- I SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/ Drg	C
1.	18HS0835	Probability & Statistics	3	1	-	4
2.	18HS0803	Biology for Engineers	3	-	-	3
3.	18CE0151	Strength of Materials	3	-	-	3
4.	18ME0304	Kinematics of Machinery	3	-	-	3
5.	18CE0152	Fluid Mechanics & Fluid Machines	3	-	-	3
6.	18ME0305	Material Testing Lab	-	-	2	1
7.	18ME0306	Machine Drawing Lab	-	-	3	1.5
8.	18CE0153	Fluid Mechanics & Fluid Machines Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
9.	18HS0804	Environmental Sciences	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 27</b>			

**II YEAR- II SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/Drg	C
1	18ME0307	Non-Conventional Energy Resources	3	-	-	3
2	18EE0240	Basic Electrical & Electronics Engineering	3	-	-	3
3	18ME0308	Manufacturing Processes	3	-	-	3
4	18ME0309	Thermodynamics	3	1	-	4
5	18ME0310	Theory of Machines	3	-	-	3
6	18ME0311	Manufacturing Processes Lab	-	-	3	1.5
7	18EE0241	Basic Electrical & Electronics Engineering lab	-	-	3	1.5
<b>Credit Course</b>						
8	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Non-Credit Course</b>						
9	18HS0817	Essence of Indian Traditional knowledge	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>6</b>	<b>20</b>
			<b>Total/Week 25</b>			

**III YEAR- I SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/Drg	C
1.	18HS0860	Supply Chain Management	3	-	-	3
2.	18ME0312	CAD/CAM	3	-	-	3
3.	18ME0313	Design of Machine Elements-I	2	1	-	3
4.	18ME0314	Machine Tools	3	-	-	3
5.	18ME0315	Thermal Engineering	3	1	-	4
6.	18ME0316	Computer Aided Modeling Lab	-	-	2	1
7.	18ME0317	Machine Tools lab	-	-	3	1.5
8.	18ME0318	Thermal Engineering Lab	-	-	3	1.5
		<b>Non-Credit Course</b>				
9.	18HS0842	Aptitude Practices	2	-	-	-
Contact Periods / Week			<b>16</b>	<b>2</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 26</b>			

**III YEAR- II SEM**

S No.	COURSE CODE	NAME OF THE SUBJECT	L	T	P/Drg	C
1.	18ME0319	Design of Machine Elements-II	2	1	-	3
2.	18ME0320	Heat & Mass Transfer	2	1	-	3
3.	18ME0321	Metrology & Measurements	3	-	-	3
<b>Professional Elective Course (PEC) –I</b>						
4.	18ME0330	Industrial Engineering & Management	3	-	-	3
	18ME0331	Production & Operations Management				
	18ME0332	Total Quality Management				
<b>OPEN ELECTIVE –I</b>						
5.	18CE0127	Elements of Road Traffic Safety	3	-	-	3
	18EE0234	Industrial Instrumentation				
	18EC0449	Introduction to IOT				
	18CS0517	Python Programming				
	18HS0814	Intellectual Property Rights				
6.	18ME0322	Heat Transfer Lab	-	-	2	1
7.	18ME0323	Metrology and Measurements Lab	-	-	2	1
8.	18ME0327	Internship (60 hours)	-	-	-	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Non -Credit Courses</b>						
10.	18HS0859	English for Corporate Communication Skills Lab	-	-	2	-
Contact Periods / Week			<b>13</b>	<b>2</b>	<b>6</b>	<b>20</b>
			<b>Total/Week 21</b>			



**IV YEAR- I SEM**

S No.	Course Code	Name of the Subject	L	T	P/Drg	C
1	18ME0324	Operations Research	3	-	-	3
2	18ME0325	Automobile Engineering	3	-	-	3
<b>Professional Elective Course (PEC) – II</b>						
3	18ME0334	Gas Dynamics and Jet Propulsion	3	-	-	3
	18ME0335	Turbo Machines				
	18ME0336	Refrigeration & Air Conditioning				
<b>Professional Elective Course (PEC) – III</b>						
4	18ME0337	Mechatronics & Robotics	3	-	-	3
	18ME0338	Finite Element Analysis				
	18ME0339	Quality Control & Reliability Engineering				
<b>Professional Elective Course (PEC) – IV</b>						
5	18ME0340	Advanced Welding processes	3	-	-	3
	18ME0341	Modern Machining Methods				
	18ME0342	Power Plant Engineering				
<b>Open Elective-II</b>						
6	18CE0146	Project Planning and Control	3	-	-	3
	18EE0236	Solar Photovoltaic Systems				
	18EC0450	MATLAB Programming				
	18CS0544	Software Development & Testing				
	18HS0815	Entrepreneurship Development				
7	18ME0326	Computer Aided Analysis Lab	-	-	3	1.5
8	18ME0328	Robot Programming Lab	-	-	3	1.5
9	18ME0329	Project Phase-I	-	-	4	2
Contact Periods / Week			<b>18</b>	<b>-</b>	<b>10</b>	<b>23</b>
			<b>Total/Week 28</b>			

**IV YEAR- II SEM**

S.No	Course Code	Name of the Subject	L	T	P/Drg	C
1.	MOOC-I		3	-	-	3
2.	MOOC-II		3	-	-	3
3.	18ME0333	Project Phase-II	-	-	22	11
Contact Periods / Week			<b>6</b>	-	<b>22</b>	<b>17</b>
			<b>Total/Week 28</b>			

**Note:**

- L – Lecture hour ; T – Tutorial ; Drg – Drawing ; P- Practical
- Engineering drawing and machine drawing are to be drawn on drawing sheets as well as AutoCAD software.
- Machine Drawing will be 4 hrs in end examination.

**Note:** Total Number of credits=  $18+20*7=158$

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**Bachelor of Technology**  
**Department of Mechanical Engineering**

**I B. Tech. – I Semester (ME)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics-I	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16HS606	Human Values & Professional Ethics	3	-	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16CS502	Computer Programming Lab	-	-	4	2
8.	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			15	3	12	21
			Total/Week 30			

**I B. Tech. – II Semester (ME)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics-II	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16ME302	Engineering Graphics	-	-	6	3
5.	16CE101	Engineering Mechanics	3	1	-	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16CE102	Applied Mechanics Lab	-	-	4	2
Contact Periods / Week			12	3	18	21
			Total/Week 33			

## II B. Tech. – I Semester (ME)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics-III	3	1	-	3
2.	16ME303	Material Sciences and Metallurgy	3	-	-	3
3.	16ME304	Kinematics of Machinery	3	1	-	3
4.	16ME305	Machine Drawing	-	-	6	3
5.	16CE104	Strength of Materials	3	1	-	3
6.	16CE112	Fluid Mechanics & Hydraulic Machinery	3	1	-	3
7.	16CE109	Strength of Materials Lab	-	-	4	2
8.	16CE116	Fluid Mechanics & Hydraulic Machinery Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I				1
<b>Audit Course</b>						
10.	16CS503	Data Structures through C	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>4</b>	<b>14</b>	<b>23</b>
			Total/Week <b>36</b>			

## II B. Tech. – II Semester (ME)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS613	Probability & Statistics	3	1	-	3
2.	16EE207	Basic Electrical & Electronics Engineering	3	1	-	3
3.	16ME306	Manufacturing Technology	3	1	-	3
4.	16ME307	Engineering Thermodynamics	3	1	-	3
5.	16ME308	Dynamics of Machinery	3	1	-	3
6.	16ME309	Manufacturing Technology Lab	-	-	4	2
7.	16EE208	Basic Electrical & Electronics Engineering	-	-	4	2
8.	16ME310	Material Sciences and Metallurgy Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II				1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>5</b>	<b>12</b>	<b>22</b>
			Total/Week <b>35</b>			

## III B. Tech. – I Semester (M.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16ME311	Industrial Engineering & Management	3	1	-	3
2.	16ME312	Thermal Engineering	3	1	-	3
3.	16ME313	Non-Conventional Energy Resources	3	1	-	3
4.	16ME314	Design of Machine Elements-I	3	1	-	3
5.	16ME315	Automobile Engineering	3	1	-	3
6.	16ME316	Machine Tools	3	1	-	3
7.	16ME317	Thermal Engineering- Lab	-	-	4	2
8.	16ME318	Machine Tools Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10.	16HS616	Aptitude Practice-I	3	-	-	-
Contact Periods / Week			21	6	8	<b>23</b>
			<b>Total/Week 35</b>			

## III B. Tech. – II Semester (M.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS605	Environmental Studies	3	-	-	3
2.	16MB750	Managerial Economics & Financial Analysis	3	-	-	3
3.	16ME319	Design of Machine Elements-II	3	1	-	3
4.	16ME320	Heat Transfer	3	1	-	3
5.	16ME321	CAD/CAM	3	1	-	3
6.	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	2
7.	16ME322	Heat Transfer Lab	-	-	4	2
8.	16ME323	Computer Aided Design Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
Contact Periods / Week			18	3	12	<b>22</b>
			<b>Total/Week 33</b>			

## IV B. Tech. I Semester (M.E)

S.No	Course Code	Subject	L	T	P	C
1.	16MB751	Entrepreneurship Development	3	1	-	3
2.	16ME324	Operations Research	3	1	-	3
3.	16ME325	Refrigeration & Air Conditioning	3	1	-	3
4.	16ME326	Metrology & Measurements	3	1	-	3
5.	<b>Department Elective – I</b>		3	1	-	3
	16ME327	Finite Element Methods				
	16ME328	Quality Control and Reliability Engineering				
	16ME329	Metal Forming Process				
6.	<b>Open Elective</b>		3	-	-	3
	16CE145	Elements of Road Traffic Safety				
	16EE239	Neural Networks & Fuzzy Logic				
	16EC443	Matlab Programming				
	16CS511	Database Management Systems				
	16MB752	Intellectual Property Rights				
7.	16ME330	Metrology and Measurements Lab	-	-	4	2
8.	16ME331	Computer Aided Engineering Lab	-	-	4	2
Contact Periods / Week			18	5	8	22
			Total/Week 31			

## IV B.Tech. – II Semester (M.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16ME332	Mechatronics	3	1	-	3
2.	<b>Department Elective – II</b>		3	-	-	3
	16ME333	Power Plant Engineering				
	16ME334	Production and Operation Management				
	16ME335	Modern Manufacturing Methods				
3.	<b>Department Elective – III</b>		3	-	-	3
	16ME336	Gas Turbine and Jet Propulsion				
	16ME337	Automation & Robotics				
	16ME338	Advanced welding processes				
4.	<b>Department Elective – IV</b>		3	-	-	3
	MOOCS	MOOC courses-offered by SWAYAM/ NPTEL/ NISTE-suggested by the department(online courses)				
5.	16ME339	Seminar	--	--	04	2
6.	16ME340	Project	--	--	20	10
Contact Periods / Week			12	1	24	24
			Total/Week 37			

\*L-Lecture hours, T-Tutorial, P-Practical, Drg: Drawing, C-Credit

Total credits: 178

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
Semester	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
Credits	21	21	23	22	23	22	22	24	178



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**Bachelor of Technology**

**Department of Electronics and Communication Engineering**

INDUCTION PROGRAM (MANDATORY)	3 WEEKS DURATION
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (ECE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	20HS0830	Algebra and Calculus	3	-	-	3
2.	20HS0802	Applied Chemistry	3	-	-	3
3.	20HS0810	Communicative English	3	-	-	3
4.	20EE0253	Principles of Electrical Circuits	3	-	-	3
5.	20ME0301	Engineering Graphics	1	-	4	3
6.	20HS0803	Applied Chemistry Lab	-	-	3	1.5
7.	20HS0811	Communicative English Lab	-	-	3	1.5
8.	20ME0302	Workshop Practice Lab	-	-	3	1.5
Contact Periods / Week			13	-	13	19.5
			Total/Week 26			

**I B. Tech. – II Semester (ECE)**

S.No.	Course Code	Subject	L	T	P	C
1.	20HS0831	Differential Equations and Complex Analysis	3	-	-	3
2.	20HS0849	Applied Physics	3	-	-	3
3.	20CS0501	C Programming and Data Structures	3	-	-	3
4.	20EC0401	Fundamentals of Digital Computing Systems	3	-	-	3
5.	20EE0254	Electrical Technology	3	-	-	3
6.	20HS0851	Applied Physics Lab	-	-	3	1.5
7.	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
8.	20EE0255	Electrical Technology Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			17	-	9	19.5
			Total/Week 29			

**II B. Tech. – I Semester (ECE)**

S.No.	Course Code	Subject	L	T	P	C
1.	20HS0834	Numerical Methods and Transforms	3	-	-	3
2.	20EC0402	Electronic Devices and Circuits	3	-	-	3
3.	20EC0403	Switching Theory and Logic Design	3	-	-	3
4.	20EC0404	Signals, Systems and Random Processes	3	-	-	3
5.	20EC0405	Analog Communications	3	-	-	3
6.	20EC0406	Electronic Devices & Logic Design Lab	-	-	3	1.5
7.	20EC0407	Signals and Systems Simulation Lab	-	-	3	1.5
8.	20EC0408	Analog Communications Lab	-	-	3	1.5
<b>Skill oriented course*</b>						
9.	20EC0455	PCB Designing Lab	1	-	2	2
<b>Non -Credit Course</b>						
10.	20HS0801	Environmental Science	2	-	-	-
Contact Periods / Week			18	-	11	21.5
			Total/Week 29			

**II B. Tech. – II Semester (ECE)**

S.No.	Course Code	Subject	L	T	P	C
1.	20EE0214	Control Systems	3	-	-	3
2.	20EC0409	Electronic Circuit Analysis	3	-	-	3
3.	20EC0410	Digital Communications	3	-	-	3
4.	20EC0411	Linear & Digital IC Applications	3	-	-	3
5.	20HS0815	Entrepreneurship Development	3	-	-	3
6.	20EC0412	Electronic Circuit Analysis Lab	-	-	3	1.5
7.	20EC0413	Digital Communications Lab	-	-	3	1.5
8.	20EC0414	Linear & Digital IC Applications Lab	-	-	3	1.5
<b>Skill oriented course*</b>						
9.	20EC0456	CCNA Lab	1	-	2	2
Contact Periods / Week			16	-	11	21.5
			Total/Week 27			
<b>Internship 2 Months (Mandatory) during summer vacation</b>						





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
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**Department of Electronics & Communication Engineering**

<b>Induction Program (Mandatory)</b>	<b>3 weeks duration</b>
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (ECE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	19HS0830	Algebra and Calculus	3	-	-	3
2.	19HS0801	Applied Chemistry	3	1	-	4
3.	19ME0302	Engineering Graphics	1	-	4	3
4.	19CS0501	Python Programming	3	-	-	3
5.	19HS0803	Applied Chemistry lab	-	-	3	1.5
6.	19CS0502	Python Programming Lab	-	-	3	1.5
7.	19ME0301	Workshop Practice Lab	-	-	4	2
Contact Periods / Week			10	1	14	18
			Total/Week		25	

**I B. Tech. – II Semester (ECE)**

S.No.	Course Code	Subject	L	T	P	C
1.	19HS0831	Differential Equations and Vector Calculus	3	1	-	4
2.	19HS0851	Semiconductor Physics	3	1	-	4
3.	19EE0239	Basic Electrical Engineering	3	-	-	3
4.	19HS0810	Communicative English	3	-	-	3
5.	19EC0401	Switching Theory and Logic Design	3	-	-	3
6.	19HS0855	Semiconductor Physics Lab	-	-	3	1.5
7.	19HS0811	Communicative English Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
8.	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			17	3	6	20
			Total/Week		26	

## II B. Tech. – I Semester (ECE)

S.No.	Course Code	Subject	L	T	P	C
1.	19HS0834	Numerical Methods and Transforms	3	1	-	4
2.	19EE0242	Network Theory	3	-	-	3
3.	19EC0402	Electronic Devices and Circuits	3	-	-	3
4.	19EC0403	Signals, Systems and Random Processes	3	-	-	3
<b>OPEN ELECTIVE - I</b>						
5.	19CE0136	Water Technology	3	-	-	3
	19EE0238	Generation of Energy through Waste				
	19ME0349	Fundamentals of Mechanical Engineering				
	19CS0549	Linux Programming				
	19HS0813	Management Science				
6.	19EC0404	Switching Theory and Logic Design Lab	-	-	2	1
7.	19EC0405	Electronic Devices and Circuits Lab	-	-	3	1.5
8.	19EC0406	Basic Simulation Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	19HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week		27	

## II B. Tech. – II Semester (ECE)

S.No.	Course Code	Subject	L	T	P	C
1.	19EC0407	Electronic Circuit Analysis	3	-	-	3
2.	19EC0408	Analog Communications	3	-	-	3
3.	19EC0409	Linear & Digital IC Applications	3	-	-	3
4.	19EC0410	Electromagnetic Theory and Transmission Lines	3	1	-	4
<b>OPEN ELECTIVE - II</b>						
5.	19CE0143	Fundamentals of Urban Planning	3	-	-	3
	19EE0233	Industrial Instrumentation				
	19ME0350	Mechanical Measurements & Control Systems				
	19CS0551	Java Programming				
	19HS0814	Intellectual Property Rights				
6.	19EC0411	Electronic Circuit Analysis Lab	-	-	2	1
7.	19EC0412	Analog Communications Lab	-	-	3	1.5
8.	19EC0413	Linear & Digital IC Applications Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	19HS0805	Environmental Science	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week		27	

## III B.Tech. – I Semester (ECE)

S.No.	Course Code	Subject	L	T	P	C
1.	19EE0212	Control Systems	3	-	-	3
2.	19EC0414	Antennas and Wave Propagation	3	1	-	4
3.	19EC0415	Digital Communications	3	-	-	3
4.	19EC0416	Electronic Measurements and Instrumentation	3	-	-	3
<b>Open Elective-III</b>						
5.	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19ME0321	Non-Conventional Energy Resources				
	19CS0545	Software Development & Testing				
	19HS0861	Business Ethics				
6.	19EC0417	Antennas and Wave Propagation Lab (Virtual Lab)	-	-	2	1
7.	19EC0418	Digital Communications Lab	-	-	3	1.5
8.	19EC0419	Electronic Measurements Lab (Virtual Lab)	-	-	3	1.5
<b>Non - Credit Course</b>						
9.	19HS0859	English for Corporate Communications Skills Lab	-	-	2	-
Contact Periods / Week			15	1	10	20
			Total/Week 26			

## III B. Tech. – II Semester (ECE)

S.No.	Course Code	Subject	L	T	P	C
1.	19HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2.	19EC0420	Digital Signal Processing	3	1	-	4
3.	19EC0421	Microprocessors and Microcontrollers	3	-	-	3
4.	19EC0422	Microwave Theory and Techniques	3	-	-	3
<b>Open Elective-IV</b>						
5.	19CE0147	Project Planning and Control	3	-	-	3
	19EE0231	Neural Networks and Fuzzy Logic				
	19ME0353	Computer Aided Process Planning				
	19CS0546	Introduction to Cyber Security				
	19HS0862	Strategic Management				
6.	19EC0423	Digital Signal Processing Lab	-	-	2	1
7.	19EC0424	Microcontroller and Applications Lab	-	-	3	1.5
8.	19EC0425	Microwave Measurements Lab	-	-	3	1.5
<b>Non - Credit Course</b>						
9.	19HS0858	Human Values and Professional Ethics	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week 27			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:PUTTUR  
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**I B. Tech. – I Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	18HS0830	Mathematics-I	3	-	-	3
2.	18HS0801	Chemistry	3	1	-	4
3.	18ME0302	Engineering Graphics & Design	1	-	4	3
4.	18HS0810	English	3	-	-	3
5.	18HS0802	Chemistry lab	-	-	3	1.5
6.	18HS0811	English Lab	-	-	3	1.5
7.	18ME0301	Workshop Practice Lab	-	-	4	2
		Induction Program (3 Weeks)	-	-	-	-
Contact Periods / Week			10	1	14	18
			Total/Week			

**I B. Tech. – II Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	18HS0831	Mathematics-II	3	1	-	4
2.	18HS0851	Semiconductor Physics	3	1	-	4
3.	18EE0239	Basic Electrical Engineering	3	-	-	3
4.	18CS0501	Programming For Problem Solving	3	-	-	3
5.	18CE0101	Engineering Mechanics	2	1	-	3
6.	18HS0852	Physics Lab	-	-	3	1.5
7.	18CS0503	Programming For Problem Solving Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
8.	18HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			17	3	6	20
			Total/Week			

## II B. Tech. – I Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	18HS0834	Mathematics-III	3	1	-	4
2.	18EC0401	Electronic Devices	3	-	-	3
3.	18EC0402	Digital System Design	3	-	-	3
4.	18EC0403	Signals & Systems	3	-	-	3
5.	18EE0242	Network Theory	3	-	-	3
6.	18EC0404	Electronic Devices Lab	-	-	3	1.5
7.	18EC0405	Digital System Design Lab	-	-	2	1
8.	18EC0406	Signals and Systems Simulation Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	18HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week		27	

## II B. Tech. – II Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	18EC0407	Analog Circuits	3	-	-	3
2.	18EC0408	Analog Communications	3	-	-	3
3.	18EC0409	Probability Theory and Stochastic Processes	3	1	-	4
4.	18HS0812	Managerial Economics and Financial Analysis	3	-	-	3
5.	18HS0803	Biology for Engineers	3	-	-	3
6.	18EC0410	Analog Circuits Lab	-	-	3	1.5
7.	18EC0411	Analog Communications Lab	-	-	3	1.5
<b>Credit Course</b>						
8.	COE-I	Comprehensive Online Exam -I	-	-	-	1
<b>Non -Credit Course</b>						
9.	18HS0804	Environmental Sciences	3	-	-	-
Contact Periods / Week			18	1	6	20
			Total/Week		25	

## III B.Tech– I Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	18EE0211	Control Systems	3	-	-	3
2.	18EC0412	Electromagnetic Theory and Transmission Lines	3	-	-	3
3.	18EC0413	Electronic Measurements and Instrumentation	3	-	-	3
4.	18EC0414	Digital Signal Processing	3	-	-	3
5.	18EC0415	Digital Communications	3	-	-	3
6.	18EC0416	Electronic Measurements Lab	-	-	3	1.5
7.	18EC0417	Digital Signal Processing Lab	-	-	4	2
8.	18EC0418	Digital Communications Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
9.	18HS0859	English for Corporate Communication Skills Lab	-	-	2	-
Contact Periods / Week			15	-	12	20
			Total/Week 27			

## III B. Tech – II Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	18EC0451	Data Communication and Networking	3	-	-	3
2.	18EC0419	Antennas and Wave Propagation	3	-	-	3
3.	18EC0420	Microprocessors and Microcontrollers	3	-	-	3
<b>Professional Elective Course (PEC) –I</b>						
4.	18EC0428	Microwave Theory and Techniques	3	-	-	3
	18EC0429	Information Theory and Coding				
	18EC0430	Scientific Computing				
<b>Open Elective-I</b>						
5.	18CE0127	Elements of Road Traffic Safety	3	-	-	3
	18EE0234	Industrial Instrumentation				
	18ME0307	Non-Conventional Energy Resources				
	18CS0517	Python Programming				
	18HS0814	Intellectual Property Rights				
6.	18EC0421	Antennas and Wave Propagation Lab (Virtual Lab)	-	-	2	1
7.	18EC0422	Microcontroller and Applications Lab	-	-	2	1
8.	18EC0425	Internship (60 Hours)	-	-	-	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination -II	-	-	-	1
<b>Non -Credit Course</b>						
10.	18HS0842	Aptitude Practices	3	-	-	-
Contact Periods / Week			18	-	4	20
			Total/Week 22			

## IV B.Tech – I Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	18HS0813	Management Science	3	-	-	3
2.	18EC0440	Embedded Systems and IoT	3	-	-	3
3.	<b>Professional Elective Course (PEC) –II</b>					
	18EC0431	VLSI Design				
	18EC0432	Wavelets	3	-	-	3
	18EC0433	Satellite Communication				
4.	<b>Professional Elective Course (PEC) –III</b>					
	18EC0434	Digital Image Processing				
	18EC0435	Speech and Audio Processing	3	-	-	3
	18EC0436	Hi Speed Electronics				
5.	<b>Professional Elective Course (PEC) –IV</b>					
	18EC0437	Mobile Communications and Networks				
	18EC0438	Fiber Optic Communications	3	-	-	3
	18EC0439	Bio-Medical Electronics				
6.	<b>Open Elective-II</b>					
	18CE0146	Project Planning and Control				
	18EE0236	Solar Photovoltaic Systems				
	18ME0353	Computer Aided Process Planning	3	-	-	3
	18CS0544	Software Development & Testing				
	18HS0815	Entrepreneurship Development				
7.	18EC0423	Embedded Systems and IoT Lab	-	-	3	1.5
8.	18EC0424	Microwave Measurements Lab	-	-	3	1.5
9.	18EC0426	Project Phase-I	-	-	4	2
Contact Periods / Week			15	-	10	23
			Total/Week : 25			

## IV B.Tech – II Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	<b>MOOC – I</b>		3	-	-	3
2.	<b>MOOC – II</b>		3	-	-	3
3.	18EC0427	Project Phase -II	-	-	22	11
Contact Periods / Week			6	-	22	17
			Total/Week:28			

**TOTAL CREDITS= 18+20+20+20+20+20+23+17=158**

**NOTE: L-Lecture, T- Theory, P-Practical, C-Credit**

**I B. Tech. – I Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics-I	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16ME302	Engineering Graphics	-	-	6	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16CS502	Computer Programming Lab	-	-	4	2
Contact Periods / Week			12	03	18	<b>21</b>
			Total/Week <b>33</b>			

**I B. Tech. – II Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics-II	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16HS606	Human Values & Professional Ethics	3	-	-	3
5.	16EE205	Network Analysis	3	1	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16EE206	Network Analysis Lab	-	-	4	2
8.	16ME301	Engineering & IT workshop Lab	-	-	4	2
Contact Periods / Week			15	03	12	<b>21</b>
			Total/Week 30			



**II B. Tech. – I Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics-III	3	1	-	3
2.	16EC401	Basic Electronic Devices	3	1	-	3
3.	16EC402	Switching Theory & Logic Design	3	1	-	3
4.	16EC403	Signals and Systems	3	1	-	3
5.	16EC404	Random Signal & Stochastic Processes	3	1	-	3
6.	16HS605	Environmental Studies	3	-		3
7.	16EC405	Basic Electronic Devices Lab	-	-	4	2
8.	16EC406	Basic Simulation Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10.	16CS503	Data Structures through C	3	-	-	-
Contact Periods / Week			21	05	08	<b>23</b>
			Total/Week <b>34</b>			

**II B. Tech. – II Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16EC407	Electronic Circuit Analysis	3	1	-	3
2.	16EC408	Computer Organization and Architecture	3	1	-	3
3.	16EC409	Electromagnetic Theory and Transmission Lines	3	1	-	3
4.	16EC410	Pulse & Digital Circuits	3	1	-	3
5.	16EE212	Electrical Technology	3	1	-	3
6.	16EC412	Electronic Circuit Analysis Lab	-	-	4	2
7.	16EC413	Pulse & Digital Circuits Lab	-	-	4	2
8.	16EE213	Electrical Technology Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week <b>35</b>			

**III B.Tech– I Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16EC415	Analog Communications	3	1	-	3
2.	16EC416	Electronic Measurements and Instrumentation	3	1	-	3
3.	16EC417	Linear IC Applications	3	1	-	3
4.	16EC418	Antennas & Wave Propagation	3	1	-	3
5.	16EE216	Linear Control Systems	3	1	-	3
6.	16MB750	Managerial Economics & Financial Analysis	3	-	-	3
7.	16EC419	Analog Communications Lab	-	-	4	2
8.	16EC420	Linear IC Applications Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10.	16HS616	Aptitude Practice-I	3	-	-	-
Contact Periods / Week			21	5	08	<b>23</b>
			Total/Week 34			

**III B.Tech – II Semester (E.C.E)**

S.No.	Course Code	Subject	L	T	P	C
1.	16EC421	Digital Communications	3	1	-	3
2.	16EC422	Digital Signal Processing	3	1	-	3
3.	16EC423	Microprocessors & Microcontrollers	3	1	-	3
4.	16EC424	Digital IC Applications	3	1	-	3
5.	16EC425	Microwave Engineering	3	1	-	3
6.	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	2
7.	16EC426	Digital Communications Lab	-	-	4	2
8.	16EC427	Digital IC Applications Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week 35			

## IV B.Tech – I Semester (E.C.E)

S.No	Course Code	Subject	L	T	P	C
1.	16MB751	Entrepreneurship Development	3	-	-	3
2.	16EC429	Embedded Systems	3	1	-	3
3.	16EC430	Optical Fiber Communication	3	1	-	3
4.	16EC431	VLSI Design	3	1	-	3
5.	<b>Department Elective – I</b>					
	16EC432	Digital Image processing	3	1	-	3
	16EC433	Medical Electronics				
	16EC434	Pattern Recognition & Applications				
6.	<b>Open Elective</b>					
	16CE145	Elements of Road Traffic Safety				
	16EE239	Neural Networks & Fuzzy Logic	3	-	-	3
	16ME313	Non-Conventional Energy Resources				
	16CS511	Database Management systems				
	16MB752	Intellectual Property Rights				
7.	16EC435	Microwave & Optical Communications Lab	-	-	4	2
8.	16EC436	Embedded Systems Lab	-	-	4	2
Contact Periods / Week			18	4	8	22
			Total/Week		30	

## IV B.Tech – II Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16EC437	Real time operating Systems	3	-	-	3
2.	<b>Department Elective – II</b>					
	16EC438	Radar & Navigational Aids	3	1	-	3
	16EC439	Satellite and TV Engineering				
	16EC440	Spread spectrum communications				
3.	<b>Department Elective – III</b>					
	16EC441	Wireless Communication & Networks	3	1	-	3
	16CS527	Computer Networks				
	16EC442	Cellular & Mobile Communication				
4.	<b>Department Elective – IV</b>					
	MOOCS	MOOC courses-offered by SWAYAM/ NPTEL/ NISTE-suggested by the Department (online courses)	-	-	-	3
5.	16EC444	Seminar	--	--	04	2
6.	16EC445	Project	--	--	20	10
Contact Periods / Week			09	02	24	24
			Total/Week		35	

\*L-Lecture hours, T-Tutorial, P-Practical, Drg: Drawing, C-Credit



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Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0830	Algebra and Calculus	3	-	-	3
2	20HS0849	Applied Physics	3	-	-	3
3	20EE0250	Principles of Electrical Engineering	3	-	-	3
4	20CS0501	C Programming and Data Structures	3	-	-	3
5	20EC0445	Basic Electronics Engineering	3	-	-	3
6	20HS0851	Applied Physics Lab	-	-	3	1.5
7	20EE0252	Basic Electrical and Electronics Engineering Lab	-	-	3	1.5
8	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>9</b>	<b>19.5</b>
			<b>Total/Week 24</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0835	Probability & Statistics	3	-	-	3
2	20HS0802	Applied Chemistry	3	-	-	3
3	20HS0810	Communicative English	3	-	-	3
4	20ME0301	Engineering Graphics	1	-	4	3
5	20CS0503	Digital Logic Design	3	-	-	3
6	20HS0803	Applied Chemistry Lab	-	-	3	1.5
7	20HS0811	Communicative English Lab	-	-	3	1.5
8	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
9	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>13</b>	<b>19.5</b>
			<b>Total/Week 28</b>			

## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	20CS0504	Computer Organization & Architecture	3	-	-	3
3	20CS0505	Database Management Systems	3	-	-	3
4	20CS0506	Object Oriented Programming through Java	3	-	-	3
5	20CS0507	Operating Systems	3	-	-	3
6	20CS0508	Database Management Systems Lab	-	-	3	1.5
7	20CS0509	Object Oriented Programming through Java Lab	-	-	3	1.5
8	20CS0510	Operating Systems Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0546	Visual Effects-VFX	1	-	2	2
<b>Non-Credit Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	-	-	-
Contact Periods / Week			<b>18</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week29</b>			

## II B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0836	Discrete Mathematics	3	-	-	3
2	20EC0416	Microprocessors and Microcontrollers	3	-	-	3
3	20CS0511	Python Programming	3	-	-	3
4	20CS0512	Formal Languages and Automata Theory	3	-	-	3
5	20CS0513	Computer Networks	3	-	-	3
6	20EC0418	Microprocessors and Microcontrollers Lab	-	-	3	1.5
7	20CS0514	Python Programming Lab	-	-	3	1.5
8	20CS0515	Linux Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0547	Animation Design	1	-	2	2
<b>Internship 2 Months (Mandatory) during summer vacation</b>						
Contact Periods / Week			<b>16</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week27</b>			



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**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1		Algebra and Calculus	3	-	-	3
2	19HS0851	Semiconductor Physics	3	1	-	4
3	19ME0302	Engineering Graphics	1	-	4	3
4	19CS0501	Python Programming	3	-	-	3
5	19HS0855	Semiconductor Physics Lab	-	-	3	1.5
6	19CS0502	Python Programming Lab	-	-	3	1.5
7	19ME0301	Workshop Practices Lab	-	-	4	2
Contact Periods / Week			<b>10</b>	<b>01</b>	<b>14</b>	<b>18</b>
			<b>Total/Week 25</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	19HS0801	Applied Chemistry	3	1	-	4
2	19HS0810	Communicative English	3	-	-	3
3	19HS0835	Probability & Statistics	3	1	-	4
4	19EE0240	Basic Electrical & Electronics Engineering	3	-	-	3
5	19CS0503	Digital Logic Design	3	-	-	3
6	19HS0803	Applied Chemistry Lab	-	-	3	1.5
7	19HS0811	Communicative English Lab	-	-	3	1.5
<b>Non Credit Course</b>						
8	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>02</b>	<b>6</b>	<b>20</b>
			<b>Total/Week 26</b>			

## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	19EC0421	Microprocessors & Microcontrollers	3	-	-	3
2	19CS0504	Computer Organization & Architecture	3	1	-	4
3	19CS0505	C and Data Structures	3	-	-	3
4	19CS0506	Database Management Systems	3	-	-	3
<b>Open Elective-I</b>						
5	19CE0136	Water Technology	3	-	-	3
	19EE0238	Generation of Energy Through Waste				
	19ME0349	Fundamentals of Mechanical Engineering				
	19EC0448	Introduction to Communication Systems				
	19HS0813	Management Science				
6	19EC0424	Microcontroller and Applications Lab	-	-	3	1.5
7	19CS0507	C and Data Structures Lab	-	-	3	1.5
8	19CS0508	Database Management Systems Lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 27</b>			

## II B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	19HS0836	Discrete Mathematics	4	-	-	4
2	19CS0509	Formal Languages and Automata Theory	3	1	-	3
3	19CS0510	Object Oriented Programming through Java	3	-	-	3
4	19CS0511	Operating Systems	3	-	-	3
<b>Open Elective-II</b>						
5	19CE0143	Fundamentals of Urban Planning	3	-	-	3
	19EE0233	Industrial Instrumentation				
	19ME0350	Mechanical Measurements & Control Systems				
	19EC0449	Elements of Embedded Systems				
	19HS0814	Intellectual Property Rights				
6	19CS0512	Object Oriented Programming through Java Lab	-	-	3	1.5
7	19CS0513	Operating Systems lab	-	-	3	1.5
8	19CS0514	Object oriented Analysis and design lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0805	Environmental Science	3	-	-	-
Contact Periods / Week			<b>19</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 28</b>			

## III B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	19CS0515	Compiler Design	3	-	-	3
2	19CS0516	Design and Analysis of Algorithms	3	1	-	4
3	19CS0517	Data Warehousing and Data Mining	3	-	-	3
4	19CS0518	Software Engineering	3	-	-	3
<b>Open Elective-III</b>						
5	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19ME0321	Non-Conventional Energy Resources				
	19EC0450	Introduction to IOT				
	19HS0861	Business Ethics				
6	19CS0519	Analysis of Algorithms Lab	-	-	3	1.5
7	19CS0520	Data Mining Lab	-	-	3	1.5
8	19CS0521	Linux Programming Lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0858	Human Values & Professional Ethics	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 27</b>			

## III B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	19CS0522	Artificial Intelligence & Machine Learning	3	-	-	3
2	19CS0523	Big Data Analytics	3	1	-	4
3	19CS0524	Computer Networks	3	-	-	3
4	19CS0525	Web Technologies	3	-	-	3
<b>Open Elective-IV</b>						
5	19CE0147	Project Planning And Control	3	-	-	3
	19EE0231	Neural Networks & Fuzzy Logic				
	19ME0353	Computer Aided Process Planning				
	19EC0451	MAT LAB Programming				
	19HS0862	Strategic Management				
6	19CS0526	Machine Learning Lab	-	-	2	1
7	19CS0527	Big Data Analytics Lab	-	-	3	1.5
8	19CS0528	Web Technologies Lab	-	-	3	1.5
<b>Non- Credit Course</b>						
9	19HS0859	English for Corporate Communication Skills Lab	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			





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**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1	18HS0830	Mathematics-1	3	0	0	3
2	18HS0801	Chemistry	3	1	0	4
3	18ME0302	Engineering Graphics & Design	1	0	4	3
4	18HS0810	English	3	0	0	3
5	18HS0802	Chemistry Lab	0	0	3	1.5
6	18HS0811	English Lab	0	0	3	1.5
7	18ME0301	Workshop Practices Lab	0	0	4	2
8		Induction Program ( 3 weeks )	0	0	0	0
Contact Periods / Week			<b>10</b>	<b>01</b>	<b>14</b>	<b>18</b>
			<b>Total/Week 25</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1.	18HS0831	Mathematics-II	3	1	0	4
2.	18HS0851	Semi-Conductor Physics	3	1	0	4
3.	18CS0501	Programming for Problem Solving	3	0	0	3
4.	18CS0502	Digital Logic Design	3	0	0	3
5.	18EE0239	Basic Electrical Engineering	3	0	0	3
6.	18CS0503	Programming for Problem Solving Lab	0	0	3	1.5
7.	18HS0852	Physics Lab	0	0	3	1.5
<b>Non- Credit Course</b>						
8.	18HS0817	Essence of Indian Traditional Knowledge	3	0	0	0
Contact Periods / Week			<b>18</b>	<b>02</b>	<b>06</b>	<b>20</b>
			<b>Total/Week 26</b>			

## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	18HS0835	Probability & Statistics	3	0	0	3
2	18EC0443	Analog Electronics Circuits	3	1	0	4
3	18CS0504	Data Structures & Algorithms	3	0	0	3
4	18CS0505	Computer Organization & Architecture	3	0	0	3
5	18CS0506	Database Management Systems	3	0	0	3
6	18CS0507	Data Structures & Algorithms Lab	0	0	3	1.5
7	18CS0508	Database Management Systems Lab	0	0	3	1.5
8	18EE0241	Basic Electrical & Electronics Engineering Lab	0	0	2	1
<b>Non- Credit Course</b>						
9	18HS0816	Indian Constitution	3	0	0	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			

## II B. Tech. – II Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1	18HS0836	Discrete Mathematics	3	0	0	3
2	18CS0509	Formal Languages and Automata Theory	3	1	0	4
3	18CS0510	Operating Systems	3	0	0	3
4	18HS0803	Biology for Engineers	3	0	0	3
5	18CS0511	Object Oriented Programming	3	0	0	3
6	18CS0512	Operating Systems Lab	0	0	3	1.5
7	18CS0513	Object Oriented Programming Lab	0	0	3	1.5
<b>Credit Course</b>						
8	COE-1	Comprehensive Online Examination – I	0	0	0	1
<b>Non- Credit Course</b>						
9	18HS0804	Environmental Sciences	3	0	0	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>06</b>	<b>20</b>
			<b>Total/Week 25</b>			

## III B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	18HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	18CS0514	Compiler Design	3	-	-	3
3	18CS0515	Computer Networks	3	1	-	4
4	18CS0516	Design and Analysis of Algorithms	3	-	-	3
5	18CS0517	Python Programming	3	-	-	3
6	18CS0518	Analysis of Algorithms Lab	-	-	3	1.5
7	18CS0519	Python Programming Lab	-	-	2	1
8	18CS0520	Object Oriented Analysis and Design Lab	-	-	3	1.5
<b>Non- Credit Course</b>						
9	18HS0842	Aptitude Practices	3	-	-	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			

## III B. Tech. – II Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1	18CS0521	Data Warehousing and Data Mining	3	-	-	3
2	18CS0522	Software Engineering	3	-	-	3
3	18CS0523	Web Technologies	3	-	-	3
4	<b>Professional Elective Course (PEC)- I</b>					
	18CS0531	Advanced Operating Systems	3	-	-	3
	18CS0532	Linux Programming				
	18CS0533	Quantum Computing				
5	<b>Open Elective-I</b>					
	18CE0127	Elements of Road Traffic Safety				
	18EE0234	Industrial Instrumentation	3	-	-	3
	18ME0307	Non-Conventional Energy Resources				
	18EC0449	Introduction to IOT				
	18HS0814	Intellectual Property Rights				
6	18CS0524	Data Mining Lab	-	-	2	1
7	18CS0525	Web Technologies Lab	-	-	2	1
8	18CS0526	Internship (60 Hours)	-	-	-	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Non- Credit Course</b>						
10	18HS0859	English for Corporate Communication Skills Lab	-	-	2	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>06</b>	<b>20</b>
			<b>Total/Week 21</b>			

## IV B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	18HS0813	Management Science	3	-	-	3
2	18CS0527	Mobile Application Development	3	-	-	3
<b>Professional Elective Course (PEC) –II</b>						
3	18CS0535	Artificial Intelligence & Machine Learning				
	18CS0536	Cloud Computing	3	-	-	3
	18CS0537	Information Retrieval System				
<b>Professional Elective Course (PEC) –III</b>						
4	18CS0538	Big Data Analytics				
	18CS0539	Human Computer Interaction	3	-	-	3
	18CS0540	Information Security				
<b>Professional Elective Course (PEC) –IV</b>						
5	18CS0541	Data Science				
	18CS0542	Cyber Security	3	-	-	3
	18CS0543	Soft Computing				
<b>Open Elective-II</b>						
6	18CE0146	Project Planning And Control				
	18EE0236	Solar Photovoltaic Systems				
	18ME0353	Computer Aided Process Planning	3	-	-	3
	18EC0450	MATLAB Programming				
	18HS0815	Entrepreneurship Development				
7	18CS0528	Mobile Application Development LAB	-	-	3	1.5
8	18CS0529	Machine Learning LAB	-	-	3	1.5
9	18CS0530	Project Phase-I	-	-	4	2
Contact Periods / Week			<b>18</b>	<b>-</b>	<b>10</b>	<b>23</b>
			<b>Total/Week 28</b>			

## IV B. Tech. – II Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1	<b>MOOC-I</b>		3	-	-	3
2	<b>MOOC-II</b>		3	-	-	3
3	18CS0534	Project Phase-II	-	-	22	11
Contact Periods / Week			<b>6</b>	<b>-</b>	<b>22</b>	<b>17</b>
			<b>Total/Week 28</b>			

\*L-Lecture hours, T-Tutorial, P-Practical, C-Credit

Total Number of Credits=158

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**Bachelor of Technology**  
**Department of Computer Science & Engineering**

**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics- I	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16ME302	Engineering Graphics	-	-	6	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16CS502	Computer Programming Lab	-	-	4	2
Contact Periods / Week			12	03	18	<b>21</b>
			Total/Week <b>33</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics-II	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16HS606	Human Values & Professional Ethics	3	-	-	3
5.	16CS503	Data Structures through C	3	1	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16CS504	Data Structures through C Lab	-	-	4	2
8.	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			15	03	12	<b>21</b>
			Total/Week <b>30</b>			

## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics-III	3	1	-	3
2.	16HS605	Environmental Studies	3	-	-	3
3.	16CS505	Advanced Data Structures through C++	3	1	-	3
4.	16CS506	Digital Logic Design	3	1	-	3
5.	16CS507	Mathematical Foundations of Computer Science	3	1	-	3
6.	16EE207	Basic Electrical and Electronics Engineering	3	1	-	3
7.	16CS508	Advanced Data Structures through C++ Lab	-	-	4	2
8.	16EE208	Basic Electrical and Electronics Engineering Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10.	16CS538	Ethical Hacking	3	-	-	-
Contact Periods / Week			21	05	08	<b>23</b>
			Total/Week <b>34</b>			

## II B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS613	Probability & Statistics	3	1	-	3
2.	16CS509	Object Oriented Programming	3	1	-	3
3.	16CS510	Computer Organization	3	1	-	3
4.	16CS511	Database Management Systems	3	1	-	3
5.	16CS512	Operating Systems	3	1	-	3
6.	16CS513	Object Oriented Programming Lab	-	-	4	2
7.	16CS514	Database Management Systems Lab	-	-	4	2
8.	16CS515	Operating Systems Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week <b>35</b>			

## III B.Tech– I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1.	16CS516	Unix & Shell Programming	3	1	-	3
2.	16CS517	Formal Languages and Automata Theory	3	1	-	3
3.	16CS518	Software Engineering& Architecture	3	1	-	3
4.	16CS519	Web Technologies	3	1	-	3
5.	16CS520	Big Data	3	1	-	3
6.	16CS521	Design and Analysis of Algorithms	3	1	-	3
7.	16CS522	Unix & Shell Programming Lab	-	-	4	2
8.	16CS523	Web Technologies Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10.	16HS616	Aptitude Practice-I	3	-	-	-
Contact Periods / Week			21	6	08	<b>23</b>
			Total/Week 35			

## III B.Tech – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1.	16EC423	Microprocessors & Microcontrollers	3	1	-	3
2.	16CS524	Compiler Design	3	1	-	3
3.	16CS525	Software Testing	3	1	-	3
4.	16CS526	Object Oriented Analysis and Design	3	1	-	3
5.	16CS527	Computer Networks	3	1	-	3
6.	16CS528	Software Testing and CASE tools Lab	-	-	4	2
7.	16CS529	Computer Networks and Microprocessors & Micro Controllers Lab	-	-	4	2
8.	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week 35			



## IV B.Tech – I Semester (CSE)

S.No	Course Code	Subject	L	T	P	C
1.	16MB750	Managerial Economics and Financial Analysis	3	1	-	3
2.	16CS530	Cyber Security	3	1	-	3
3.	16CS531	Data Warehousing and Data Mining	3	1	-	3
4.	16CS532	Mobile Application Development	3	1	-	3
5.	<b>Department Elective – I</b>		3	1	-	3
	16CS533	System Applications & Product				
	16CS534	Software Project Management				
	16CS535	Human Computer Interaction				
6.	<b>Open Elective</b>		3	-	-	3
	16CE145	Elements of Road Traffic Safety				
	16EE239	Neural Networks & Fuzzy Logic				
	16ME313	Non-Conventional Energy Resources				
	16EC443	Matlab Programming				
	16MB752	Intellectual Property Rights				
7.	16CS539	Data Warehousing and Data Mining Lab	-	-	4	2
8.	16CS540	Mobile Application development Lab	-	-	4	2
Contact Periods / Week			18	5	8	22
			Total/Week 31			

## IV B.Tech – II Semester (E.C.E)

S.No.	Course Code	Subject	L	T	P	C
1.	16MB751	Entrepreneurship Development	3	-	-	3
2.	<b>Department Elective – II</b>		3	1	-	3
	16CS536	Data Science & Analytics				
	16CS537	Artificial Intelligence				
	16CS538	Cloud Computing				
3.	<b>Department Elective – III</b>		3	1	-	3
	16CS541	Mobile Computing				
	16CS542	Real Time Systems				
	16CS543	Python Programming				
4.	<b>Department Elective – IV</b>		-	-	-	3
	<b>MOOCS</b>	MOOC courses-offered by SWAYAM/ NPTEL/ NISTE-suggested by the department(online courses)				
5.	16CS547	Seminar	-	-	04	2
6.	16CS548	Project	-	-	20	10
Contact Periods / Week			09	02	24	24
			Total/Week 35			

**Note :** \*L-Lecture hours, T-Tutorial, P-Practical, Drg: Drawing, C-Credit

**Total credits:178**

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
Semester	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
Credits	21	21	23	22	23	22	22	24	178





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR  
(AUTONOMOUS)  
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY**

<b>INDUCTION PROGRAM (MANDATORY)</b>	<b>3 WEEKS DURATION</b>
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0830	Algebra and Calculus	3	-	-	3
2	20HS0849	Applied Physics	3	-	-	3
3	20EE0250	Principles of Electrical Engineering	3	-	-	3
4	20CS0501	C Programming and Data Structures	3	-	-	3
5	20EC0445	Basic Electronics Engineering	3	-	-	3
6	20HS0851	Applied Physics Lab	-	-	3	1.5
7	20EE0252	Basic Electrical and Electronics Engineering Lab	-	-	3	1.5
8	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>9</b>	<b>19.5</b>
			<b>Total/Week 24</b>			

**I B. Tech. – II Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0835	Probability & Statistics	3	-	-	3
2	20HS0802	Applied Chemistry	3	-	-	3
3	20HS0810	Communicative English	3	-	-	3
4	20ME0301	Engineering Graphics	1	-	4	3
5	20CS0503	Digital Logic Design	3	-	-	3
6	20HS0803	Applied Chemistry Lab	-	-	3	1.5
7	20HS0811	Communicative English Lab	-	-	3	1.5
8	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
9	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>13</b>	<b>19.5</b>
			<b>Total/Week 28</b>			

## II B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	20CS0504	Computer Organization & Architecture	3	-	-	3
3	20CS0505	Database Management Systems	3	-	-	3
4	20CS0506	Object Oriented Programming through Java	3	-	-	3
5	20CI0601	Principles of Operating Systems	3	-	-	3
6	20CS0508	Database Management Systems Lab	-	-	3	1.5
7	20CS0509	Object Oriented Programming through Java Lab	-	-	3	1.5
8	20CI0602	Principles of Operating Systems Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0546	Visual Effects-VFX	1	-	2	2
<b>Non-Credit Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	-	-	-
Contact Periods / Week			<b>18</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week29</b>			

## II B. Tech. – II Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0836	Discrete Mathematics	3	-	-	3
2	20EC0416	Microprocessors and Microcontrollers	3	-	-	3
3	20CS0511	Python Programming	3	-	-	3
4	20CS0512	Formal Languages and Automata Theory	3	-	-	3
5	20CI0603	Unix & Shell Programming	3	-	-	3
6	20EC0418	Microprocessors and Microcontrollers Lab	-	-	3	1.5
7	20CS0514	Python Programming Lab	-	-	3	1.5
8	20CI0604	Unix & Shell Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0547	Animation Design	1	-	2	2
<b>Internship 2 Months (Mandatory) during summer vacation</b>						
Contact Periods / Week			<b>16</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week27</b>			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**Department of Computer Science and Information Technology**

INDUCTION PROGRAM (MANDATORY)	3 WEEKS DURATION
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1	19HS0830	Algebra and Calculus	3	0	0	3
2	19HS0851	Semiconductor Physics	3	1	0	4
3	19ME0302	Engineering Graphics	1	0	4	3
4	19CS0501	Python Programming	3	0	0	3
5	19HS0855	Semiconductor Physics Lab	0	0	3	1.5
6	19CS0502	Python Programming Lab	0	0	3	1.5
7	19ME0301	Workshop Practices Lab	0	0	4	2
Contact Periods / Week			<b>10</b>	<b>01</b>	<b>14</b>	<b>18</b>
			<b>Total/Week 25</b>			

**I B. Tech. – II Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1	19HS0801	Applied Chemistry	3	1	0	4
2	19HS0810	Communicative English	3	0	0	3
3	19HS0835	Probability & Statistics	3	1	0	4
4	19EE0240	Basic Electrical & Electronics Engineering	3	0	0	3
5	19CS0503	Digital Logic Design	3	0	0	3
6	19HS0803	Applied Chemistry Lab	0	0	3	1.5
7	19HS0811	Communicative English Lab	0	0	3	1.5
<b>Non Credit Course</b>						
8	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>02</b>	<b>6</b>	<b>20</b>
			<b>Total/Week26</b>			

## II B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	19EC0421	Microprocessors & Microcontrollers	3	-	-	3
2	19CS0504	Computer Organization & Architecture	3	1	-	4
3	19CS0505	C and Data Structures	3	-	-	3
4	19CS0506	Database Management Systems	3	-	-	3
<b>Open Elective-I</b>						
5	19CE0136	Water Technology	3	-	-	3
	19EE0238	Generation of Energy Through Waste				
	19ME0349	Fundamentals of Mechanical Engineering				
	19EC0448	Introduction to Communication Systems				
	19HS0813	Management Science				
6	19EC0424	Microcontroller and Applications Lab	-	-	3	1.5
7	19CS0507	C and Data Structures Lab	-	-	3	1.5
8	19CS0508	Database Management Systems Lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 27</b>			

## II B. Tech. – II Semester (CSIT)

S. No.	Course Code	Subject	L	T	P	C
1	19HS0836	Discrete Mathematics	4	-	-	4
2	19CS0509	Formal Languages and Automata Theory	3	1	-	3
3	19CS0510	Object Oriented Programming through Java	3	-	-	3
4	19CI0601	Principles of Operating Systems	3	-	-	3
<b>Open Elective-II</b>						
5	19CE0143	Fundamentals of Urban Planning	3	-	-	3
	19EE0233	Industrial Instrumentation				
	19ME0350	Mechanical Measurements & Control Systems				
	19EC0449	Elements of Embedded Systems				
	19HS0814	Intellectual Property Rights				
6	19CS0512	Object Oriented Programming through Java Lab	-	-	3	1.5
7	19CI0602	Principles of Operating Systems Lab	-	-	3	1.5
8	19CS0514	Object oriented Analysis and design lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0805	Environmental Science	3	-	-	-
Contact Periods / Week			<b>19</b>	<b>1</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 28</b>			

## III B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	19CS0515	Compiler Design	3	-	-	3
2	19CS0516	Design and Analysis of Algorithms	3	1	-	4
3	19CS0517	Data Warehousing and Data Mining	3	-	-	3
4	19CI0603	Software Engineering & Testing	3	-	-	3
<b>Open Elective-III</b>						
5	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19ME0321	Non-Conventional Energy Resources				
	19EC0450	Introduction to IOT				
	19HS0861	Business Ethics				
6	19CS0519	Analysis of Algorithms lab	-	-	3	1.5
7	19CS0520	Data Mining Lab	-	-	3	1.5
8	19CI0604	Software Engineering & Testing Lab	-	-	2	1
<b>Non- Credit Course</b>						
9	19HS0858	Human Values & Professional Ethics	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>1</b>	<b>8</b>	<b>20</b>
			<b>Total/Week 27</b>			

## III B. Tech. – II Semester (CSIT)

S.No	Course Code	Subject	L	T	P	C
1	19CS0522	Artificial Intelligence & Machine Learning	3	-	-	3
2	19CS0523	Big Data Analytics	3	1	-	4
3	19CS0524	Computer Networks	3	-	-	3
4	19CS0525	Web Technologies	3	-	-	3
<b>Open Elective-IV</b>						
5	19CE0147	Project Planning and Control	3	-	-	3
	19EE0231	Neural Networks and Fuzzy Logic				
	19ME0353	Computer Aided Process Planning				
	19EC0451	MAT LAB Programming				
	19HS0862	Strategic Management				
6	19CS0526	Machine Learning Lab	-	-	2	1
7	19CS0527	Big Data Analytics Lab	-	-	3	1.5
8	19CS0528	Web Technologies Lab	-	-	3	1.5
<b>Non- Credit Course</b>						
9	19HS0859	English for Corporate Communication Skills Lab	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
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**Department of Computer Science and Information Technology**

INDUCTION PROGRAM (MANDATORY)	3 WEEKS DURATION
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**I B. Tech. – I Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1	18HS0830	Mathematics-1	3	-	-	3
2	18HS0801	Chemistry	3	1	-	4
3	18ME0302	Engineering Graphics & Design	1	-	4	3
4	18HS0810	English	3	-	-	3
5	18HS0802	Chemistry Lab	-	-	3	1.5
6	18HS0811	English Lab	-	-	3	1.5
7	18ME0301	Workshop Practices Lab	-	-	4	2
		Induction Program ( 3 weeks )	-	-	-	-
Contact Periods / Week			<b>10</b>	<b>01</b>	<b>14</b>	<b>18</b>
			<b>Total/Week 25</b>			

**I B. Tech. – II Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1.	18HS0831	Mathematics-II	3	1	-	4
2.	18HS0851	Semi-Conductor Physics	3	1	-	4
3.	18CS0501	Programming for Problem Solving	3	-	-	3
4.	18CS0502	Digital Logic Design	3	-	-	3
5.	18EE0239	Basic Electrical Engineering	3	-	-	3
6.	18CS0503	Programming for Problem Solving Lab	-	-	3	1.5
7.	18HS0852	Physics Lab	-	-	3	1.5
<b>Non- Credit Course</b>						
8.	18HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			<b>18</b>	<b>02</b>	<b>06</b>	<b>20</b>
			<b>Total/Week26</b>			

## II B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	18HS0835	Probability & Statistics	3	-	-	3
2	18EC0443	Analog Electronics Circuits	3	1	-	4
3	18CS0504	Data Structures & Algorithms	3	-	-	3
4	18CS0505	Computer Organization & Architecture	3	-	-	3
5	18CS0506	Database Management Systems	3	-	-	3
6	18CS0507	Data Structures & Algorithms Lab	-	-	3	1.5
7	18CS0508	Database Management Systems Lab	-	-	3	1.5
8	18EE0241	Basic Electrical & Electronics Engineering Lab	-	-	2	1
<b>Non- Credit Course</b>						
9	18HS0816	Indian Constitution	3	0	0	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			

## II B. Tech. – II Semester (CSIT)

S. No.	Course Code	Subject	L	T	P	C
1	18HS0836	Discrete Mathematics	3	-	-	3
2	18CS0509	Formal Languages and Automata Theory	3	1	-	4
3	18CI0601	Fundamentals of Operating Systems	3	-	-	3
4	18HS0803	Biology for Engineers	3	-	-	3
5	18CS0511	Object Oriented Programming	3	-	-	3
6	18CI0602	Fundamentals of Operating Systems Lab	-	-	3	1.5
7	18CS0513	Object Oriented Programming Lab	-	-	3	1.5
<b>Credit Course</b>						
8	COE-1	Comprehensive Online Examination – I	-	-	-	1
<b>Non- Credit Course</b>						
9	18HS0804	Environmental Sciences	3	-	-	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>06</b>	<b>20</b>
			<b>Total/Week 25</b>			

**III B. Tech. – I Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1	18HS0812	Managerial Economics and Financial Analysis	3	-	-	3
2	18CS0515	Computer Networks	3	1	-	4
3	18CS0516	Design and Analysis of Algorithms	3	-	-	3
4	18CS0517	Python Programming	3	-	-	3
5	18CI0603	Software Engineering & Testing	3	-	-	3
6	18CS0518	Analysis of Algorithms Lab	-	-	3	1.5
7	18CS0519	Python Programming Lab	-	-	2	1
8	18CI0604	Software Engineering & Testing Lab	-	-	3	1.5
<b>Non- Credit Course</b>						
9	18HS0842	Aptitude Practices	3	-	-	0
Contact Periods / Week			<b>18</b>	<b>01</b>	<b>08</b>	<b>20</b>
			<b>Total/Week 27</b>			

**III B. Tech. – II Semester (CSIT)**

S. No.	Course Code	Subject	L	T	P	C
1	18CS0514	Compiler Design	3	-	-	3
2	18CS0521	Data Warehousing and Data Mining	3	-	-	3
3	18CS0523	Web Technologies	3	-	-	3
<b>Professional Elective Course (PEC)- I</b>						
4	18CS0531	Advanced Operating Systems	3	-	-	3
	18CS0532	Linux Programming				
	18CI0610	Internetworking with TCP/IP				
<b>Open Elective-I</b>						
5	18CE0127	Elements of Road Traffic Safety	3	-	-	3
	18EE0234	Industrial Instrumentation				
	18ME0307	Non-Conventional Energy Resources				
	18EC0449	Introduction to IOT				
	18HS0814	Intellectual Property Rights				
6	18CS0524	Data Mining Lab	-	-	2	1
7	18CS0525	Web Technologies Lab	-	-	2	1
8	18CI0605	Internship (60 Hours)	-	-	-	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Non- Credit Course</b>						
10	18HS0859	English for Corporate Communication Skills Lab	-	-	2	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>06</b>	<b>20</b>
			<b>Total/Weeks 21</b>			



## IV B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1	18HS0813	Management Science	3	-	-	3
2	18CI0606	Cryptography & Network Security	3	-	-	3
<b>Professional Elective Course (PEC) –II</b>						
3	18CS0535	Artificial Intelligence & Machine Learning				
	18CI0612	Grid & Cloud Computing	3	-	-	3
	18CI0613	Computer Forensics				
<b>Professional Elective Course (PEC) –III</b>						
4	18CI0614	Essentials of Big Data Analytics				
	18CI0615	Software Process & Project Management	3	-	-;	3
	18CS0541	Data Science				
<b>Professional Elective Course (PEC) –IV</b>						
5	18CI0616	ANN & Deep Learning				
	18CI0617	Cryptocurrency & Blockchain Technology	3	-	-	3
	18CS0542	Cyber Security				
<b>Open Elective-II</b>						
6	18CE0146	Project Planning and Control				
	18EE0236	Solar Photovoltaic Systems				
	18ME0353	Computer Aided Process Planning	3	-	-	3
	18EC0450	MATLAB Programming				
	18HS0815	Entrepreneurship Development				
7	18CI0607	Cryptography Lab	-	-	3	1.5
8	18CI0608	Introduction to Machine Learning Lab	-	-	3	1.5
9	18CI0609	Project Phase-I	-	-	4	2
Contact Periods / Week			<b>18</b>	<b>-</b>	<b>10</b>	<b>23</b>
			<b>Total/Week 28</b>			

## IV B. Tech. – II Semester (CSIT)

S. No.	Course Code	Subject	L	T	P	C
1		MOOC-I	3	-	-	3
2		MOOC-II	3	-	-	3
3	18CI0611	Project Phase-II	-	-	16	11
Contact Periods / Week			6	-	16	17
			Total/Week		22	

**\*L-Lecture hours, T-Tutorial, P-Practical, C-Credit**

**Total Number of Credits=158**

**\*L-Lecture hours, T-Tutorial, P-Practical, C-Credit**

**Total Number of Credits=158**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
**Bachelor of Technology**

**Department of Computer Science & Information Technology**

**I B. Tech. – I Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	16HS601	Functional English	3	-	-	3
2.	16HS602	Engineering Mathematics- I	3	1	-	3
3.	16HS604	Engineering Chemistry	3	1	-	3
4.	16CS501	Computer Programming	3	1	-	3
5.	16ME302	Engineering Graphics	-	-	6	3
6.	16HS607	English Language and Communication Skills Lab	-	-	4	2
7.	16HS609	Engineering Chemistry Lab	-	-	4	2
8.	16CS502	Computer Programming Lab	-	-	4	2
Contact Periods / Week			12	03	18	<b>21</b>
			Total/Week <b>33</b>			

**I B. Tech. – II Semester (CSIT)**

S.No.	Course Code	Subject	L	T	P	C
1.	16HS610	Professional English	3	-	-	3
2.	16HS611	Engineering Mathematics-II	3	1	-	3
3.	16HS603	Engineering Physics	3	1	-	3
4.	16HS606	Human Values & Professional Ethics	3	-	-	3
5.	16CS503	Data Structures through C	3	1	-	3
6.	16HS608	Engineering Physics Lab	-	-	4	2
7.	16CS504	Data Structures through C Lab	-	-	4	2
8.	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			15	03	12	<b>21</b>
			Total/Week <b>30</b>			

## II B. Tech. – I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1.	16HS612	Engineering Mathematics-III	3	1	-	3
2.	16HS605	Environmental Studies	3	-	-	3
3.	16CS505	Advanced Data Structures through C++	3	1	-	3
4.	16CS506	Digital Logic Design	3	1	-	3
5.	16CS507	Mathematical Foundations of Computer Science	3	1	-	3
6.	16EE207	Basic Electrical and Electronics Engineering	3	1	-	3
7.	16CS508	Advanced Data Structures through C++ Lab	-	-	4	2
8.	16EE208	Basic Electrical and Electronics Engineering Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10.	16CS538	Ethical Hacking	3	-	-	-
Contact Periods / Week			21	05	08	<b>23</b>
			Total/Week <b>34</b>			

## II B. Tech. – II Semester (CSIT)

S. No.	Course Code	Subject	L	T	P	C
1.	16HS613	Probability & Statistics	3	1	-	3
2.	16CS509	Object Oriented Programming	3	1	-	3
3.	16CS510	Computer Organization	3	1	-	3
4.	16CS511	Database Management Systems	3	1	-	3
5.	16IT601	Fundamentals of Operating Systems	3	1	-	3
6.	16CS513	Object Oriented Programming Lab	-	-	4	2
7.	16CS514	Database Management Systems Lab	-	-	4	2
8.	16IT602	Fundamentals of Operating Systems Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10.	16HS614	Comprehensive Soft Skills-I	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week <b>35</b>			

## III B. Tech– I Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1.	16CS527	Computer Networks	3	1	-	3
2.	16CS517	Formal Languages and Automata Theory	3	1	-	3
3.	16IT603	Python & R Programming	3	1	-	3
4.	16CS531	Data Warehousing and Data Mining	3	1	-	3
5.	16MB750	Managerial Economics and Financial Analysis	3	1	-	3
6.	16CS521	Design and Analysis of Algorithms	3	1	-	3
7.	16IT604	Computer Networks Lab	-	-	4	2
8.	16IT605	Data Mining, Python & R programming Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10.	16HS616	Aptitude Practice-I	3	-	-	-
Contact Periods / Week			21	6	08	<b>23</b>
			Total/Week 35			

## III B. Tech – II Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1.	16IT606	Computer Graphics & Animation	3	1	-	3
2.	16CS524	Compiler Design	3	1	-	3
3.	16IT607	Software Engineering & Testing	3	1	-	3
4.	16CS526	Object Oriented Analysis and Design	3	1	-	3
5.	16IT608	Linux programming	3	1	-	3
6.	16CS528	Software Testing and CASE tools Lab	-	-	4	2
7.	16IT609	Linux programming Lab	-	-	4	2
8.	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	2
<b>Credit Course</b>						
9.	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10.	16HS617	Aptitude Practice-II	3	-	-	-
Contact Periods / Week			18	5	12	<b>22</b>
			Total/Week 35			

## IV B. Tech – I Semester (CSIT)

S.No	Course Code	Subject	L	T	P	C
1.	16IT610	Statistical Machine Learning	3	1	-	3
2.	16IT611	Information Security	3	1	-	3
3.	16CS519	Web Technologies	3	1	-	3
4.	16CS532	Mobile Application Development	3	1	-	3
<b>Department Elective – I</b>						
5.	16IT614	Internetworking with TCP/IP	3	1	-	3
	16CS534	Software Project Management				
	16IT615	Essentials of Big Data Analytics				
<b>Open Elective</b>						
6.	16CE145	Elements of Road Traffic Safety	3	-	-	3
	16EE239	Neural Networks & Fuzzy Logic				
	16ME313	Non-Conventional Energy Resources				
	16EC443	MATLAB Programming				
	16MB752	Intellectual Property Rights				
7.	16CS523	Web Technologies Lab	-	-	4	2
8.	16CS540	Mobile Application development Lab	-	-	4	2
Contact Periods / Week			18	5	8	<b>22</b>
			Total/Week 31			

## IV B. Tech – II Semester (CSIT)

S.No.	Course Code	Subject	L	T	P	C
1.	16MB751	Entrepreneurship Development	3	-	-	3
<b>Department Elective – II</b>						
2.	16IT616	Enabling Technology for Data Science & Analytics : IoT	3	1	-	3
	16IT617	Image Processing				
	16IT618	Distributed Computing				
<b>Department Elective – III</b>						
3.	16CS541	Mobile Computing	3	1	-	3
	16IT619	Computer Vision & Deep Learning				
	16IT620	Crypto currency & Block chain Technology				
<b>Department Elective – IV</b>						
4.	<b>MOOCS</b>	MOOC courses-offered by SWAYAM/ NPTEL/ NISTE-suggested by the department(online courses)	-	-	-	3
5.	16IT612	Seminar	-	-	4	2
6.	16IT613	Project	-	-	20	10
Contact Periods / Week			09	02	24	<b>24</b>
			Total/Week 35			

**Note :** \*L-Lecture hours, T-Tutorial, P-Practical, Drg: Drawing, C-Credit

**Total credits:178**

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
Credits	21	21	23	22	23	22	22	24	178



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
(AUTONOMOUS)  
**DEPARTMENT OF AGRICULTURAL ENGINEERING**

Induction Program (Mandatory)	3 weeks duration
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester**

Sl. No.	Course Code	Name of the Subject	L	T	P/Drg	C
1	20HS0830	Algebra and Calculus	3	0	0	3
2	20HS0848	Engineering Physics	3	0	0	3
3	20ME0351	Basic Electrical & Mechanical Engineering	3	0	0	3
4	20CS0501	C Programming and Data Structures	3	0	0	3
5	20ME0303	Basic Thermodynamics	3	0	0	3
6	20HS0850	Engineering Physics Lab	0	0	3	1.5
7	20ME0352	Basic Electrical & Mechanical Engineering Lab	0	0	3	1.5
8	20CS0502	C Programming and Data Structures Lab	0	0	3	1.5
Contact Periods / Week			15	0	9	<b>19.5</b>
			Total/Week 24			

**I B. Tech. – II Semester**

Sl. No.	Course Code	Name of the Subject	L	T	P/Drg	C
1	20HS0831	Differential Equations and Complex Analysis	3	0	0	3
2	20HS0804	Engineering Chemistry	3	0	0	3
3	20HS0810	Communicative English	3	0	0	3
4	20ME0301	Engineering Graphics	1	0	4	3
5	20CE0163	Basics of Engineering Mechanics	3	0	0	3
6	20HS0805	Engineering Chemistry Lab	0	0	3	1.5
7	20HS0811	Communicative English Lab	0	0	3	1.5
8	20ME0302	Workshop practice lab	0	0	3	1.5
9	20HS0816	Indian Constitution	2	0	0	0
Contact Periods / Week			15	0	13	<b>19.5</b>
			Total/Week 28			



## II B. Tech. – I Semester

Sl. No.	Course Code	Name of the Subject	L	T	P/Drg	C
1	20ME0315	Heat & Mass Transfer	3	0	0	3
2	20CE0164	Mechanics of Solids	3	0	0	3
3	20CE0104	Surveying & Geomatics	3	0	0	3
4	20AG0701	Principles of Agronomy & Soil Science	3	0	0	3
5	20AG0702	Greenhouse Technology	3	0	0	3
6	20CE0106	Strength of Materials Lab	0	0	3	1.5
7	20CE0107	Surveying Laboratory	0	0	3	1.5
8	20AG0703	Principles of Agronomy & Soil Science Lab	0	0	3	1.5
<b>Skill Oriented Course</b>						
9	20CE0110	Geographic Information System	1	0	2	2
<b>Mandatory Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	0	0	0
Contact Periods / Week			18	0	11	
					Total/Week 29	<b>21.5</b>

## II B. Tech. – II Semester

Sl. No.	Course Code	Name of the Subject	L	T	P/Drg	C
1	20HS0833	Numerical Methods, Probability & Statistics	3	0	0	3
2	20CE0160	Fluid Mechanics & Hydraulic Machinery	3	0	0	3
3	20ME0310	Theory of Machines	3	0	0	3
4	20AG0704	Farm Machinery & Equipment-I	3	0	0	3
5	20HS0812	Managerial Economics and Financial Analysis	3	0	0	3
6	20CE0112	Fluid Mechanics & Hydraulic Machinery Lab	0	0	3	1.5
7	20AG0705	Farm Machinery & Equipment-I Lab	0	0	3	1.5
8	20ME0311	Computer Aided Machine Drawing lab	0	0	3	1.5
<b>Skill Oriented Course</b>						
9	20ME0372	Computer Aided Modeling Lab	1	0	2	2
Contact Periods / Week			16		11	
					Total/Week 28	<b>21.5</b>
<b>Internship 2 Months (Mandatory) during summer vacation</b>						



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**Department of Agricultural Engineering**

Induction Program (Mandatory)	3 weeks duration
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (AGE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	19HS0848	Engineering Physics	3	1	-	4
2.	19HS0830	Algebra and Calculus	3	-	-	3
3.	19HS0810	Communicative English	3	-	-	3
4.	19CE0101	Engineering Mechanics	2	1	-	3
5.	19HS0852	Engineering Physics Lab	-	-	3	1.5
6.	19HS0811	Communicative English Lab	-	-	3	1.5
7.	19ME0301	Workshop practice lab	-	-	4	2
Contact Periods / Week			11	2	10	18
			Total/Week		23	

**I B. Tech. – II Semester (AGE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1.	19HS0802	Engineering Chemistry	3	1	-	4
2.	19HS0831	Differential Equations and Vector Calculus	3	1	-	4
3.	19EE0240	Basic Electrical and Electronics Engineering	3	-	-	3
4.	19CS0501	Python Programming	3	-	-	3
5.	19ME0302	Engineering Graphics	1	-	4	3
6.	19HS0806	Engineering Chemistry Lab	-	-	3	1.5
7.	19CS0502	Python Programming Lab	-	-	3	1.5
<b>Non -Credit Course</b>						
8.	19HS0816	Indian Constitution	3	-	-	-
Contact Periods / Week			16	2	10	20
			Total/Week		28	

## II B. Tech. – I Semester (AGE)

S.No	Course Code	Subject	L	T	P/Drg	C
1	19ME0305	Engineering Thermodynamics	2	1	-	3
2	19CE0150	Strength of Materials	3	1	-	4
3	19CE0104	Surveying & Geomatics	3	-	-	3
4	19AG0701	Greenhouse Technology	3	-	-	3
<b>Open Elective – I</b>						
5	19CE0136	Water Technology	3	-	-	3
	19EE0238	Generation of Energy Through Waste				
	19ME0349	Fundamentals of Mechanical Engineering				
	19EC0448	Introduction to Communication Systems				
	19CS0550	Relational Database Management System				
	19HS0813	Management Science				
6	19CE0106	Strength of Materials Lab	-	-	3	1.5
7	19CE0107	Surveying Laboratory	-	-	3	1.5
8	19ME0310	Computer Aided Machine Drawing lab	-	-	2	1
<b>Non -Credit Course</b>						
9	19HS0805	Environmental Science	3	-	-	-
Contact Periods / Week			17	2	8	20
			Total/Week		27	

## II B. Tech. – II Semester (AGE)

S.No	Course Code	Subject	L	T	P/Drg	C
1	19HS0833	Numerical Methods, Probability & Statistics	4	-	-	4
2	19CE0151	Fluid Mechanics & Hydraulic Machinery	2	1	-	3
3	19AG0702	Farm Machinery & Equipment-I	3	-	-	3
4	19AG0703	Principles of Agronomy & Soil Science	3	-	-	3
<b>Open Elective - II</b>						
5	19CE0143	Fundamentals of Urban Planning	3	-	-	3
	19EE0233	Industrial Instrumentation				
	19ME0350	Mechanical Measurements & Control Systems				
	19EC0449	Elements of Embedded Systems				
	19CS0551	Java Programming				
	19HS0814	Intellectual Property Rights				
6	19CE0112	Fluid Mechanics & Hydraulic Machinery Lab	-	-	3	1.5
7	19AG0704	Farm Machinery & Equipment-I Lab	-	-	3	1.5
	19AG0705	Principles of Agronomy & Soil Science Lab	-	-	2	1
<b>Non -Credit Course</b>						
9	19HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
Contact Periods / Week			19	1	8	20
			Total/Week		28	

## III B. Tech. – I Semester (AGE)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19ME0319	Heat & Mass Transfer	3	-	-	3
2	19CE0152	Soil Mechanics	3	-	-	3
3	19AG0706	Farm machinery & Equipment-II	3	-	-	3
4	19AG0707	Agricultural Process Engineering	3	1	-	4
<b>Open Elective – III</b>						
5	19CE0129	Elements of Road Traffic Safety	3	-	-	3
	19EE0239	Solar Photovoltaic Systems				
	19ME0321	Non-Conventional Energy Resources				
	19EC0450	Introduction to IOT				
	19CS0545	Software Development & Testing				
	19HS0861	Business Ethics				
6	19CE0153	Soil Mechanics Lab	-	-	3	1.5
7	19AG0708	Farm machinery & Equipment-II Lab	-	-	3	1.5
8	19AG0709	Agricultural Process Engineering Lab	-	-	2	1
<b>Non -Credit Course</b>						
9	19HS0858	Human Values and Professional Ethics	3	-	-	-
Contact Periods / Week			18	1	8	20
			Total/Week		27	

## III B. Tech. – II Semester (AGE)

S.No	Course Code	Subject	L	T	P/ Drg	C
1	19HS0815	Entrepreneurship Development	3	-	-	3
2	19ME0307	Theory of Machines	3	-	-	3
3	19AG0710	Dairy & Food Engineering	3	1	-	4
4	19AG0711	Soil and Water Conservation Engineering	3	-	-	3
<b>Open Elective - IV</b>						
5	19CE0147	Project Planning and Control	3	-	-	3
	19EE0231	Neural Networks and Fuzzy Logic				
	19ME0353	Computer Aided Process Planning				
	19EC0451	MATLAB Programming				
	19CS0546	Introduction to Cyber Security				
	19HS0862	Strategic Management				
6	19AG0712	Dairy & Food Engineering Lab	-	-	3	1.5
7	19AG0713	Soil and Water Conservation Engineering Lab	-	-	3	1.5
8	19AG0714	Agricultural Engineering (Virtual Lab)	-	-	2	1
<b>Non -Credit Course</b>						
9	19HS0859	English for Corporate Communication Skills Lab	-	-	2	-
Contact Periods / Week			15	1	10	20
			Total/Week		26	



SIDDHARTH INSTITUTE OF ENGINEERING &amp; TECHNOLOGY::PUTTUR

(AUTONOMOUS)

DEPARTMENT OF AGRICULTURAL ENGINEERING

Course Structure

Bachelor of Technology

Agricultural Engineering (AGE)

**I YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0848	Physics	3	1	-	4
2	18HS0830	Mathematics – I	3	-	-	3
3	18CS0501	Programming for problem solving	3	-	-	3
4	18CE0101	Engineering Mechanics	2	1	-	3
5	18HS0852	Physics Lab	-	-	3	1.5
6	18CS0503	Programming for problem solving Lab	-	-	3	1.5
7	18ME0301	Workshop practice lab	-	-	4	2
8	Induction Program (3 weeks)		-	-	-	-
Contact periods / week			11	2	10	18
			Total/Week			

**I YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0801	Chemistry	3	1	-	4
2	18HS0831	Mathematics – II	3	1	-	4
3	18EE0240	Basic Electrical and Electronics Engineering	3	-	-	3
4	18HS0810	English	3	-	-	3
5	18ME0302	Engineering Graphics & Design	1	-	4	3
6	18HS0802	Chemistry Lab	-	-	3	1.5
7	18HS0811	English Lab	-	-	3	1.5
<b>NON - CREDIT COURSE</b>						
8	18HS0816	India Constitution	3	-	-	-
Contact periods / week			16	2	10	20
			Total/Week			

**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18HS0803	Biology for Engineers	3	-	-	3
2	18HS0832	Transform & Discrete Mathematics	3	1	-	4
3	18AG0701	Principles of Agricultural Engineering	3	-	-	3
4	18CE0151	Strength of Materials	3	-	-	3
5	18CE0104	Introduction to Fluid Mechanics	3	-	-	3
6	18CE0105	Solid Mechanics Lab	-	-	3	1.5
7	18CE0106	Fluid Mechanics Lab	-	-	2	1
8	18CE0107	Computer Aided Building Drawing	-	-	3	1.5
<b>NON- CREDIT COURSE</b>						
9	18HS0804	Environmental Science	3	-	-	-
<b>Contact Periods / Week</b>			18	1	8	<b>20</b>
			Total/Week		<b>27</b>	

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18AG0702	Principles of Soil Science	3	-	-	3
2	18AG0703	Hydrology, Ground Water & Well Engineering	3	1	-	4
3	18CE0109	Surveying & Geomatics	3	-	-	3
4	18ME0346	Mechanical Engineering	3	-	-	3
5	18ME0350	Thermodynamics & Heat Engines	3	-	-	3
6	18AG0704	Principles of Soil Science Lab	-	-	3	1.5
7	18CE0113	Surveying Lab – I	-	-	3	1.5
<b>CREDIT – COURSE</b>						
8	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>NON - CREDIT COURSE</b>						
9	18HS0817	Essence of Indian Traditional Knowledge	3	-	-	-
<b>Contact Periods / Week</b>			18	1	6	<b>20</b>
			Total/Week		<b>25</b>	

**III YEAR – I SEMESTER**

<b>S No.</b>	<b>COURSE CODE</b>	<b>SUBJECT</b>	<b>L</b>	<b>T</b>	<b>P/Drg</b>	<b>C</b>
1	18ME0310	Theory of Machines	3	-	-	3
2	18CE0154	Soil Mechanics	3	-	-	3
3	18ME0335	Refrigeration & Air Conditioning	2	1	-	3
4	18AG0705	Agricultural Process Engineering	3	1	-	4
5	18AG0706	Farm machinery and Equipment-I	3	-	-	3
6	18CE0155	Soil Mechanics Lab	-	-	3	1.5
7	18AG0707	Agricultural Process Engineering Lab	-	-	3	1.5
8	18AG0708	Farm machinery and Equipment-I Lab	-	-	2	1
<b>NON - CREDIT COURSE</b>						
9	18HS0842	Aptitude Practices	3	-	-	-
<b>Contact Periods / Week</b>			18	1	8	<b>20</b>
			Total/Week		<b>27</b>	

**III YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18ME0320	Heat & Mass Transfer	2	1	-	3
2	18AG0709	Irrigation & Drainage Engineering	3	-	-	3
3	18AG0710	Farm machinery and Equipment-II	3	-	-	3
<b>PROFESSIONAL ELECTIVE COURSE (PEC) – I</b>						
4	18AG0718	Agricultural Engineering Structures	3	-	-	3
	18AG0719	Dairy & Food Engineering				
	18AG0720	Solid Waste & By-Product Utilization				
	<b>OPEN ELECTIVE – I</b>					
5	18CE0127	Elements of Road Traffic Safety	3	-	-	3
	18EE0234	Industrial Instrumentation				
	18ME0307	Non-Conventional Energy Resources				
	18EC0449	Introduction to IOT				
	18CS0517	Python Programming				
	18HS0814	Intellectual Property Rights				
6	18AG0711	Irrigation & Drainage Engineering Lab	-	-	2	1
7	18AG0712	Farm machinery and Equipment-II Lab	-	-	2	1
8	18AG0715	Internship (60 Hours)	-	-	-	2
<b>CREDIT COURSE</b>						
9	COE-II	Comprehensive Online Examination – II	-	-	-	1
<b>NON-CREDIT COURSE</b>						
10	18HS0859	English for Corporate Communication Skills Lab	-	-	2	-
<b>Contact Periods / Week</b>			18	-	4	<b>20</b>
			<b>Total/Week 22</b>			



**IV YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/Drg	C
1	18HS0860	Supply Chain Management	3	-	-	3
2	18AG0721	Greenhouse Technology	3	-	-	3
3	<b>PROFESSIONAL ELECTIVE COURSE (PEC) – II</b>					
	18AG0722	Food Processing Plant Design and Layout	3	-	-	3
	18AG0723	Food Packaging Technology				
	18AG0724	Food Quality and Control				
4	<b>PROFESSIONAL ELECTIVE COURSE (PEC) – III</b>					
	18AG0725	Tractor Systems & Controls				
	18AG0726	Design of Agricultural Machinery	3	-	-	3
	18AG0727	Precision Agriculture and System Management				
5	<b>PROFESSIONAL ELECTIVE COURSE (PEC) – IV</b>					
	18AG0728	Information Technology for Land and Water Management	3	-	-	3
	18AG0729	Watershed Development				
	18AG0730	Soil and Water Conservation Engineering				
6	<b>OPEN ELECTIVE – II</b>					
	18CE0146	Project Planning and Control				
	18EE0236	Solar Photovoltaic Systems	3	-	-	3
	18ME0353	Computer Aided Process Planning				
	18EC0450	MATLAB Programming				
	18CS0544	Software Development & Testing				
	18HS0815	Entrepreneurship Development				
6	18AG0713	Remote sensing & GIS Applications in Agricultural Engineering Lab	-	-	3	1.5
7	18AG0714	Agricultural Engineering Lab (Virtual Lab)	-	-	3	1.5
8	18AG0716	Project Phase-I	-	-	4	2
<b>Contact Periods / Week</b>			18	-	10	<b>23</b>
			Total/Week		<b>28</b>	

**IV YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1		MOOC-I	-	-	-	3
2		MOOC-II	-	-	-	3
3	18AG0717	Project Phase-II	-	-	22	11
<b>Contact Periods / Week</b>			6		22	<b>17</b>
			Total/Week		<b>28</b>	

**Note:** L – Lecture hours, T – Tutorial, P – Practical, Drg. – Drawing, C – Credit Total  
Credits: 158

Year	I Year		II Year		III Year		IV Year		Total
Semester	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	I Sem	II Sem	
Credits	18	20	20	20	20	20	23	17	158

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**BACHELOR OF TECHNOLOGY**  
**DEPARTMENT OF AGRICULTURAL ENGINEERING**  
**CURRICULUM**

**I YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/Drg	C
1	16HS601	Functional English	3	-	-	3
2	16HS602	Engineering Mathematics-I	3	1	-	3
3	16HS603	Engineering Physics	3	1	-	3
4	16CS501	Computer Programming	3	1	-	3
5	16HS606	Human Values and Professional Ethics	3	-	-	3
6	16HS608	Engineering Physics Lab	-	-	4	2
7	16CS502	Computer Programming Lab	-	-	4	2
8	16ME301	Engineering & IT Workshop Lab	-	-	4	2
Contact Periods / Week			<b>15</b>	<b>3</b>	<b>12</b>	<b>21</b>
			Total/Week 30			

**I YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/Drg	C
1	16HS610	Professional English	3	-	-	3
2	16HS611	Engineering Mathematics-II	3	1	-	3
3	16HS604	Engineering Chemistry	3	1	-	3
4	16ME302	Engineering Graphics	-	-	6	3
5	16CE101	Engineering Mechanics	3	1	-	3
6	16HS607	English Language and Communication Skills Lab	-	-	4	2
7	16HS609	Engineering Chemistry Lab	-	-	4	2
8	16CE102	Applied Mechanics Lab	-	-	4	2
Contact Periods / Week			<b>12</b>	<b>3</b>	<b>18</b>	<b>21</b>
			Total/Week 33			

**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	16HS612	Engineering Mathematics-III	3	1	-	3
2	16AG701	Engineering Properties of Biological Materials	3	1	-	3
3	16CE104	Strength of Materials	3	1	-	3
4	16CE112	Fluid Mechanics & Hydraulic Machinery	3	1	-	3
5	16EE207	Basic Electrical & Electronics Engineering	3	1	-	3
6	16CE155	Soil Science & Mechanics	3	-	-	3
7	16CE158	Strength of Materials / Soil Mechanics Lab	-	-	4	2
8	16CE116	Fluid Mechanics & Hydraulic Machinery Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10	16CS503	Data Structures Through C	3	-	-	
Contact Periods / Week			<b>21</b>	<b>5</b>	<b>8</b>	<b>23</b>
			Total/Week 34			

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	16HS613	Probability & Statistics	3	1	-	3
2	16AG702	Principles of Agronomy and Soil Science	3	1	-	3
3	16CE156	Hydrology	3	1	-	3
4	16CE105	Surveying	3	1	-	3
5	16ME344	Theory of Machines	3	1	-	3
6	16ME345	Tractor and Automotive Engines	3	1	-	3
7	16CE157	Surveying Lab	-	-	4	2
8	16AG703	Agronomy and Soil Science Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10	16HS614	Comprehensive Soft Skills	3	-	-	
Contact Periods / Week			<b>21</b>	<b>6</b>	<b>8</b>	<b>23</b>
			Total/Week 32			

**III YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/Drg	C
1	16AG704	Agricultural Process Engineering	3	1	-	3
2	16AG705	Soil and Water Conservation Engineering	3	-	-	3
3	16AG706	Irrigation and Drainage Engineering	3	-	-	3
4	16AG707	Farm Machinery and Equipment-I	3	1	-	3
5	16ME307	Engineering Thermodynamics	3	1	-	3
6	16AG708	Design of Agricultural Machinery	3	1	-	3
7	16AG709	Soil and Water Conservation Engineering Lab	-	-	4	2
8	16AG710	Irrigation and Drainage Engineering Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10	16HS616	Aptitude Practice-I	3	-	-	
Contact Periods / Week			<b>18</b>	<b>4</b>	<b>8</b>	<b>23</b>
			Total/Week 30			

**III YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/Drg	C
1	16HS605	Environmental Studies	3	-	-	3
2	16AG711	Agro Industry and Bi-Product Utilization	3	1	-	3
3	16AG712	Farm Machinery and Renewable Energy Resources	3	-	-	3
4	16ME343	Heat and Mass Transfer	3	1	-	3
5	16AG713	Tractor Systems and Control	3	1	-	3
6	16AG714	Farm Machinery and Renewable Energy Resources Lab	-	-	4	2
7	16AG715	Workshop Technology Lab	-	-	4	2
8	16ME331	Computer Aided Engineering Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-IV	Comprehensive Online Examination-IV	-	-	-	1
<b>Audit Course</b>						
10	16HS617	Aptitude Practice-II	3	-	-	
Contact Periods / Week			<b>18</b>	<b>3</b>	<b>12</b>	<b>22</b>
			Total/Week 33			

**IV YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	16MB750	Managerial Economics and Financial Analysis	3	-	-	3
2	16AG716	Dairy and Food Engineering	3	1	-	3
3	16AG717	Greenhouse Technology	3	1	-	3
4	16ME325	Refrigeration and Air Conditioning	3	1	-	3
<b>DEPARTMENT ELECTIVE-I</b>						
5	16AG718	Micro Irrigation Engineering	3	1	-	3
	16AG719	Tractor Design and Testing				
	16AG721	Remote Sensing and GIS Application				
<b>OPEN ELECTIVE</b>						
6	16CE145	Elements of Road Traffic Safety	3	-	-	3
	16EE239	Neural Networks & Fuzzy Logic				
	16EC443	Mat lab Programming				
	16CS511	Data Base Management Systems				
	16MB732	Intellectual property Rights				
	16ME313	Non-Conventional Energy Resources				
7	16ME317	Thermal Engineering Lab	-	-	4	2
8	16AG720	Field Operation and Maintenance of Tractors and Farm Machinery Lab	-	-	4	2
Contact Periods / Week			<b>18</b>	<b>4</b>	<b>8</b>	<b>22</b>
			Total/Week 30			

**IV YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	16MB751	Entrepreneurship Development	3	-	-	3
<b>DEPARTMENT ELECTIVE-II</b>						
2	16AG722	Food Processing Plant Design and Layout	2	1	-	2
	16AG726	Information Technology for Land and Water Management	2	1	-	2
	16AG727	Design of Agricultural Machinery	2	1	-	2
<b>DEPARTMENT ELECTIVE-III</b>						
3	16AG723	Ground Water Hydrology-Wells and Pumps	3	1	-	3
	16AG724	Operations Research				
	16AG725	Water Resources Systems Planning & Management				
<b>MOOCS</b>						
4	MOOCS	MOOC courses-offered by SWAYAM/NPTEL/NISTE-suggested by the department (online courses)	3	1	-	3
5	16AG728	Seminar	-	-	4	2
6	16AG729	Project Work	-	-	20	10
Contact Periods / Week			<b>11</b>	<b>3</b>	<b>24</b>	<b>23</b>
			Total/Week 38			

\* L – Lecture Hours, T – Tutorial, P – Practical, Drg – Drawing, C – Credit.

**Total Credits:**

Year	1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year		4 <sup>th</sup> year		Total
	I sem	II sem	I sem	II sem	I sem	II sem	I sem	II sem	
<b>Credits</b>	21	21	23	23	23	22	22	23	178



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
CSE (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)**

INDUCTION PROGRAM (MANDATORY)	3 WEEKS DURATION
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0830	Algebra and Calculus	3	-	-	3
2	20HS0849	Applied Physics	3	-	-	3
3	20EE0250	Principles of Electrical Engineering	3	-	-	3
4	20CS0501	C Programming and Data Structures	3	-	-	3
5	20EC0445	Basic Electronics Engineering	3	-	-	3
6	20HS0851	Applied Physics Lab	-	-	3	1.5
7	20EE0252	Basic Electrical and Electronics Engineering Lab	-	-	3	1.5
8	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>9</b>	<b>19.5</b>
			<b>Total/Week 24</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0835	Probability & Statistics	3	-	-	3
2	20HS0802	Applied Chemistry	3	-	-	3
3	20HS0810	Communicative English	3	-	-	3
4	20ME0301	Engineering Graphics	1	-	4	3
5	20CS0503	Digital Logic Design	3	-	-	3
6	20HS0803	Applied Chemistry Lab	-	-	3	1.5
7	20HS0811	Communicative English Lab	-	-	3	1.5
8	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
9	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>13</b>	<b>19.5</b>
			<b>Total/Week 28</b>			



## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0845	Mathematical and Statistical Methods	3	-	-	3
2	20CS0504	Computer Organization & Architecture	3	-	-	3
3	20CS0505	Database Management Systems	3	-	-	3
4	20CS0507	Operating Systems	3	-	-	3
5	20CS0511	Python Programming	3	-	-	3
6	20CS0508	Database Management Systems Lab	-	-	3	1.5
7	20CS0510	Operating Systems Lab	-	-	3	1.5
8	20CS0514	Python Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0546	Visual Effects-VFX	1	-	2	2
<b>Non-Credit Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	-	-	-
Contact Periods / Week			<b>18</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week29</b>			

## II B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0836	Discrete Mathematics	3	-	-	3
2	20CS0901	Fundamentals of Artificial Intelligence	3	-	-	3
3	20CS0506	Object Oriented Programming through Java	3	-	-	3
4	20CS0513	Computer Networks	3	-	-	3
5	20HS0812	Managerial Economics & Financial Analysis	3	-	-	3
6	20CS0902	Artificial Intelligence Lab	-	-	3	1.5
7	20CS0509	Object Oriented Programming through Java Lab	-	-	3	1.5
8	20CS0515	Linux Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0547	Animation Design	1	-	2	2
<b>Internship 2 Months (Mandatory) during summer vacation</b>						
Contact Periods / Week			<b>16</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week27</b>			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
CSE (IOT & CS INCLUDING BCT)**

INDUCTION PROGRAM (MANDATORY)	3 WEEKS DURATION
Induction program for students to be offered right at the start of the first year.	<ul style="list-style-type: none"> <li>• Physical activity</li> <li>• Creative Arts</li> <li>• Universal Human Values</li> <li>• Literary</li> <li>• Proficiency Modules</li> <li>• Lectures by Eminent People</li> <li>• Visits to local Areas</li> <li>• Familiarization to Dept./Branch &amp; Innovations</li> </ul>

**I B. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0830	Algebra and Calculus	3	-	-	3
2	20HS0849	Applied Physics	3	-	-	3
3	20EE0250	Principles of Electrical Engineering	3	-	-	3
4	20CS0501	C Programming and Data Structures	3	-	-	3
5	20EC0445	Basic Electronics Engineering	3	-	-	3
6	20HS0851	Applied Physics Lab	-	-	3	1.5
7	20EE0252	Basic Electrical and Electronics Engineering Lab	-	-	3	1.5
8	20CS0502	C Programming and Data Structures Lab	-	-	3	1.5
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>9</b>	<b>19.5</b>
			<b>Total/Week 24</b>			

**I B. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1	20HS0835	Probability & Statistics	3	-	-	3
2	20HS0802	Applied Chemistry	3	-	-	3
3	20HS0810	Communicative English	3	-	-	3
4	20ME0301	Engineering Graphics	1	-	4	3
5	20CS0503	Digital Logic Design	3	-	-	3
6	20HS0803	Applied Chemistry Lab	-	-	3	1.5
7	20HS0811	Communicative English Lab	-	-	3	1.5
8	20ME0302	Workshop Practice Lab	-	-	3	1.5
<b>Non-Credit Course</b>						
9	20HS0816	Indian Constitution	2	-	-	-
Contact Periods / Week			<b>15</b>	<b>-</b>	<b>13</b>	<b>19.5</b>
			<b>Total/Week 28</b>			

## II B. Tech. – I Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0845	Mathematical and Statistical Methods	3	-	-	3
2	20CS0504	Computer Organization & Architecture	3	-	-	3
3	20CS0506	Object Oriented Programming through Java	3	-	-	3
4	20CS0507	Operating Systems	3	-	-	3
5	20CS0513	Computer Networks	3	-	-	3
6	20CS0509	Object Oriented Programming through Java Lab	-	-	3	1.5
7	20CS0510	Operating Systems Lab	-	-	3	1.5
8	20CS0515	Linux Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0546	Visual Effects-VFX	1	-	2	2
<b>Non-Credit Course</b>						
10	20HS0858	Human Values and Professional Ethics	2	-	-	-
Contact Periods / Week			<b>18</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week29</b>			

## II B. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1	20HS0836	Discrete Mathematics	3	-	-	3
2	20CS1001	Cryptography & Data Security	3	-	-	3
3	20CS0505	Database Management Systems	3	-	-	3
4	20CS0511	Python Programming	3	-	-	3
5	20HS0812	Managerial Economics & Financial Analysis	3	-	-	3
6	20CS1002	Cryptography & Data Security Lab	-	-	3	1.5
7	20CS0508	Database Management Systems Lab	-	-	3	1.5
8	20CS0514	Python Programming Lab	-	-	3	1.5
<b>Skill Oriented Course</b>						
9	20CS0547	Animation Design	1	-	2	2
<b>Internship 2 Months (Mandatory) during summer vacation</b>						
Contact Periods / Week			<b>16</b>	-	<b>11</b>	<b>21.5</b>
			<b>Total/Week27</b>			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**Department of Civil Engineering  
Master of Technology  
Specialization: Structural Engineering**

**I M.Tech - I Semester**

S No.	Course Code	Course Name	L	T	P/ Drg	C
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20CE1001	Advanced Structural Analysis	3	-	-	3
3	20CE1002	Advanced Solid Mechanics	3	-	-	3
<b>Programme Elective (PE) – I</b>						
4	20CE1008	Theory of Thin Plates and Shells				
	20CE1009	Theory and Applications of Cement Composites	3	-	-	3
	20CE1010	Theory of Structural Stability				
<b>Programme Elective (PE) – II</b>						
5	20HS0837	Analytical and Numerical Methods for Structural Engineering				
	20CE1011	Structural Health Monitoring	3	-	-	3
	20CE1012	Structural Optimization				
6	20CE1003	Structural Design Lab	-	-	4	2
7	20CE1004	Advanced Concrete Lab	-	-	4	2
<b>Audit Course – I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact periods / week</b>			16	-	8	<b>18</b>
			Total/Week		<b>24</b>	

**L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits.**

**I M.Tech - II Semester**

No.	Course Code	Course Name	L	T	P/ Drg	C
1	20CE1005	FEM in Structural Engineering	3	-	-	3
2	20CE1006	Structural Dynamics	3	-	-	3
<b>Programme Elective (PE) – III</b>						
3	20CE1013	Advanced Steel Design	3	-	-	3
	20CE1014	Design of Formwork				
	20CE1015	Design of High-Rise Structures				
	20CE1016	Design of Masonry Structures				
<b>Programme Elective (PE) – IV</b>						
4	20CE1017	Design of Advanced Concrete Structures	3	-	-	3
	20CE1018	Advanced Design of Foundations				
	20CE1019	Soil Structure Interaction				
	20CE1020	Design of Industrial Structure				
5	20CE1007	Structural Dynamics lab (Virtual Lab)	-	-	4	2
6	20HS0838	Numerical Analysis Lab	-	-	4	2
7	20CE1025	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	20HS0829	Constitution of India	2	-	-	-
<b>Contact periods / week</b>			14	-	12	<b>18</b>
			<b>Total/Week26</b>			

**L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits.**

**II M.Tech – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	<b>Professional Elective Course (PEC) – V</b>					
	20CE1021	Design of Prestressed Concrete Structures	3	-	-	3
	20CE1022	Analysis of Laminated Composite Plates				
	20CE1023	Fracture Mechanics of Concrete Structures				
	20CE1024	Design of Plates and Shells				
<b>Open Elective Course</b>						
2	20HS0824	Business Analytics	3	-	-	3
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
	20EE2128	Waste to Energy				
3	20CE1026	Dissertation Phase – I	-	-	20	10
<b>Contact Periods / Week</b>			6	-	20	<b>16</b>
			Total/Week <b>26</b>			

L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits.

**II M.Tech – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	20CE1027	Dissertation Phase – II	-	-	32	16
<b>Contact Periods / Week</b>			-	-	32	<b>16</b>
			Total/Week <b>32</b>			

L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits.

**AUDIT COURSE I & II**

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Addition
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills.

**Note:**

- L – Lecture hour; T – Tutorial; Drg – Drawing; P Practical; C –Credits.
- **Total credits:18+18+16+16=68**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)  
Department of Civil Engineering**

**M.Tech. (Civil Engineering)  
Specialization: Structural Engineering**

**I M.Tech - I Semester**

S No.	Course Code	Course Name	L	T	P/ Drg	C
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19CE1001	Advanced Structural Analysis	3	-	-	3
3	19CE1002	Advanced Solid Mechanics	3	-	-	3
<b>Programme Elective (PE) – I</b>						
4	19CE1008	Theory of Thin Plates and Shells				
	19CE1009	Theory and Applications of Cement Composites	3	-	-	3
	19CE1010	Theory of Structural Stability				
<b>Programme Elective (PE) – II</b>						
5	19HS0837	Analytical and Numerical Methods for Structural Engineering				
	19CE1011	Structural Health Monitoring	3	-	-	3
	19CE1012	Structural Optimization				
6	19CE1003	Structural Design Lab	-	-	4	2
7	19CE1004	Advanced Concrete Lab	-	-	4	2
<b>Audit Course – I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact periods / week</b>			16	-	8	<b>18</b>
			Total/Week		<b>24</b>	

## I M.Tech - II Semester

No.	Course Code	Course Name	L	T	P/ Drg	C
1	19CE1005	FEM in Structural Engineering	3	-	-	3
2	19CE1006	Structural Dynamics	3	-	-	3
<b>Programme Elective (PE) – III</b>						
3	19CE1013	Advanced Steel Design	3	-	-	3
	19CE1014	Design of Formwork				
	19CE1015	Design of High-Rise Structures				
	19CE1016	Design of Masonry Structures				
<b>Programme Elective (PE) – IV</b>						
4	19CE1017	Design of Advanced Concrete Structures	3	-	-	3
	19CE1018	Advanced Design of Foundations				
	19CE1019	Soil Structure Interaction				
	19CE1020	Design of Industrial Structure				
5	19CE1007	Model Testing Lab	-	-	4	2
6	19HS0838	Numerical Analysis Lab	-	-	4	2
7	19CE1025	Mini Project	-	-	4	2
<b>Audit Course – II</b>						
8	19HS0829	Constitution of India	2	-	-	-
<b>Contact periods / week</b>			14	-	12	<b>18</b>
			Total/Week			
			<b>26</b>			

L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits.



**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	<b>Professional Elective Course (PEC) – V</b>					
	19CE1021	Design of Prestressed Concrete Structures	3	-	-	3
	19CE1022	Analysis of Laminated Composite Plates				
	19CE1023	Fracture Mechanics of Concrete Structures				
	19CE1024	Design of Plates and Shells				
2	<b>Open Elective Course</b>					
	19HS0824	Business Analytics	3	-	-	3
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
	19EE2128	Waste to Energy				
3	19CE1026	Dissertation Phase – I				
<b>Contact Periods / Week</b>			6	-	20	<b>16</b>
			<b>Total/Week</b>		<b>26</b>	

L – Lecture hour; T – Tutorial; Drg – Drawing; P - Practical; C – Credits

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	19CE1027	Dissertation Phase – II	-	-	32	16
<b>Contact Periods / Week</b>			-	-	32	<b>16</b>
			<b>Total/Week</b>		<b>32</b>	

**Note:**

- L – Lecture hour; T – Tutorial; Drg – Drawing; P Practical; C – Credits.
- **Total credits: 18+18+16+16=68**

**Course Structure**  
Master of Technology  
**Structural Engineering (SE)**

**I YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18CE1001	Advanced Structural Analysis	3	-	-	3
2	18CE1002	Advanced Solid Mechanics	3	-	-	3
3	<b>Professional Elective Course (PEC) – I</b>		3	-	-	3
	18CE1008	Theory of Thin Plates and Shells				
	18CE1009	Theory and Applications of Cement Composites				
	18CE1010	Theory of Structural Stability				
4	<b>Professional Elective Course (PEC) – II</b>		3	-	-	3
	18HS0837	Analytical and Numerical Methods for Structural Engineering				
	18CE1011	Structural Health Monitoring				
	18CE1012	Structural Optimization				
5	18CE1003	Structural Design Lab	-	-	4	2
6	18CE1004	Advanced Concrete Lab	-	-	4	2
7	18HS0823	Research Methodology and IPR	2	-	-	2
8	<b>Audit Course - I</b>		2	-	-	-
	18HS0818	English for Research Paper Writing				
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
<b>Contact periods / week</b>			16	-	8	<b>18</b>
			Total/Week		<b>24</b>	

**I YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18CE1005	FEM in Structural Engineering	3	-	-	3
2	18CE1006	Structural Dynamics	3	-	-	3
<b>Professional Elective Course (PEC) – III</b>						
3	18CE1013	Advanced Steel Design				
	18CE1014	Design of Formwork	3	-	-	3
	18CE1015	Design of High Rise Structures				
	18CE1016	Design of Masonry Structures				
<b>Professional Elective Course (PEC) – IV</b>						
4	18CE1017	Design of Advanced Concrete Structures				
	18CE1018	Advanced Design of Foundations	3	-	-	3
	18CE1019	Soil Structure Interaction				
	18CE1020	Design of Industrial Structure				
5	18CE1007	Model Testing Lab	-	-	4	2
6	18HS0838	Numerical Analysis Lab	-	-	4	2
7	18CE1025	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	18HS0819	Personality Development Through Life Enlightenment Skills				
	18HS0827	Pedagogy Studies	2	-	-	-
	18HS0828	Stress Management by Yoga				
	18HS0829	Constitution of India				
<b>Contact periods / week</b>			14	-	12	<b>18</b>
			Total/Week		<b>26</b>	

**II YEAR – I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	<b>Professional Elective Course (PEC) – V</b>					
	18CE1021	Design of Prestressed Concrete Structures	3	-	-	3
	18CE1022	Analysis of Laminated Composite Plates				
	18CE1023	Fracture Mechanics of Concrete Structures				
	18CE1024	Design of Plates and Shells				
2	<b>Open Elective Course</b>					
	18HS0824	Business Analytics	3	-	-	3
	18ME3121	Industrial Safety				
	18ME3122	Advances in Operations Research				
	18CE1028	Cost Management of Engineering Projects				
	18ME3123	Composite Materials				
	18EE2128	Waste to Energy				
3	18CE1026	Dissertation Phase – I				
<b>Contact Periods / Week</b>			6	-	20	<b>16</b>
			Total/Week		<b>26</b>	

**II YEAR – II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P/ Drg	C
1	18CE1027	Dissertation Phase – II	-	-	32	16
<b>Contact Periods / Week</b>			-	-	32	<b>16</b>
			Total/Week		<b>32</b>	

**Note:**

- L – Lecture hour; T – Tutorial; Drg – Drawing; P Practical; C – Credits.
- **Total credits: 18+18+16+16=68**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING  
M.Tech (Structural Engineering)  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16CE2001	Advanced Concrete Technology	4	0	-	4
2.	16CE2002	Theory of Elasticity	4	0	-	4
3.	16CE2003	Advanced Structural Analysis	4	0	-	4
4.	16CE2004	Structural dynamics (SD)	4	0	-	4
5.	16CE2005	Advanced Prestressed Concrete	4	0	-	4
<b>ELECTIVE-I</b>						
6	16CE2006	Low Cost Housing Techniques	4	0	-	4
	16CE2007	Bridge Engineering				
	16CE2008	Pre-fabricated Concrete Structures				
<b>LABORATORY</b>						
7.	16CE2009	Structural Engineering Lab	-	-	4	2
Contact periods / week			24	0	4	26
			Total/Week		28	

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16CE2010	Advanced Reinforced Concrete Design	4	0	-	4
2.	16CE2011	Advanced Structural Steel Design	4	0	-	4
3.	16CE2012	Finite Element Methods	4	0	-	4
4.	16CE2013	Theory And Design of Plates and Shells	4	0	-	4
5.	16CE2014	Stability of Structures (SS)	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16CE2015	Experimental Stress Analysis (ESA)	4	0	-	4
	16CE2016	Construction Project Management (CPM)				
	16CE2017	Earthquake Resistant Structures(ERS)				
<b>LABORATORY 1</b>						
7.	16CE2018	Computing Techniques Lab	-	-	4	2
Contact Periods / Week			24	0	4	26
			Total/Week		28	

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16CE2019	Seminar	2
2	16CE2020	Project work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**Control System (M.Tech)**

**Department of Electrical and Electronics Engineering (EEE)**

**I Year 1<sup>st</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20EE2001	Mathematical Methods in Control Systems	3	-	-	3
3	20EE2002	Non-Linear Systems	3	-	-	3
<b>Programme Elective (PE)-I</b>						
4	20EE2003	Robotics and Automation	3	-	-	3
	20EE2004	Digital Control Systems				
	20EE2005	Non Linear control Systems				
<b>Programme Elective (PE)-II</b>						
5	20EE2006	Systems Biology	3	-	-	3
	20EE2122	SCADA system and Applications				
	20EE2007	Design Aspects in Control Systems				
6	20EE2008	Control Systems Lab	-	-	4	2
7	20EE2009	Programmable Logic Controller Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course- I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/Week</b>			16		8	<b>18</b>
			<b>Total 24/Week</b>			

I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	20EE2010	Optimal Control Theory	3	-	-	3
2	20EE2011	Industrial Automation	3	-	-	3
<b>Programme Elective (PE)-III</b>						
3	20EE2012	Advanced Control System	3	-	-	3
	20EE2013	Advanced Robotics				
	20EE2014	Adaptive Learning and Control Systems				
<b>Programme Elective (PE)-IV</b>						
4	20EE2015	Model Reduction in Control Systems	3	-	-	3
	20EE2016	Robust Control				
	20EE2116	Advanced Digital Signal Processing				
5	20EE2019	Mini Project	-	-	4	2
6	20EE2020	Advanced Control Systems Lab	-	-	4	2
7	20EE2111	Industrial Automation Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course-II</b>						
8	20HS0829	Constitution of India	3	-	-	-
<b>Contact Periods/Week</b>			14	-	12	<b>18</b>
			<b>Total 26/Week</b>			

II Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	20EE2021	Elective-V Machine Learning Techniques	3	-	-	3
	20EE2022	Stochastic Control				
	20EE2023	Computational Methods				
2	20HS0824	Open Elective 1. Business Analytics	3	-	-	3
	20ME3026	2. Industrial Safety				
	20ME3027	3. Advances in Operations Research				
	20CE1028	4. Cost Management of Engineering Projects				
	20ME3028	5. Composite Materials				
	20EE2128	6. Waste to Energy				
3	20EE2024	Phase-I Dissertation	0	-	20	10
Contact Periods/Week			6		20	16
			Total 26/Week			

II Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19EE2025	Phase-II Dissertation	-	-	32	16
			-	-	32	16
Contact Periods/Week			Total / Week 32			16





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**Control System (M.Tech)**

**Department of Electrical and Electronics Engineering (EEE)**

**I Year 1<sup>st</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19EE2001	Mathematical Methods in Control Systems	3	-	-	3
3	19EE2002	Non-Linear Systems	3	-	-	3
<b>Programme Elective (PE)-I</b>						
4	19EE2003 19EE2004 19EE2005	Robotics and Automation Digital Control Systems Non Linear control Systems	3	-	-	3
<b>Programme Elective (PE)-II</b>						
5	19EE2006 19EE2122 19EE2007	Systems Biology SCADA system and Applications Design Aspects in Control Systems	3	-	-	3
6	19EE2008	Control Systems Lab	-	-	4	2
7	19EE2009	Programmable Logic Controller Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course- I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/Week</b>			16		8	<b>18</b>
			<b>Total 24/Week</b>			

I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19EE2010	Optimal Control Theory	3	-	-	3
2	19EE2011	Industrial Automation	3	-	-	3
<b>Programme Elective (PE)-III</b>						
3	19EE2012	Advanced Control System	3	-	-	3
	19EE2013	Advanced Robotics				
	19EE2014	Adaptive Learning and Control Systems				
<b>Programme Elective (PE)-IV</b>						
4	19EE2015	Model Reduction in Control Systems	3	-	-	3
	19EE2016	Robust Control				
	19EE2116	Advanced Digital Signal Processing				
5	19EE2019	Mini Project	-	-	4	2
6	19EE2020	Advanced Control Systems Lab	-	-	4	2
7	19EE2111	Industrial Automation Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course-II</b>						
8	19HS0829	Constitution of India	3	-	-	-
<b>Contact Periods/Week</b>			14	-	12	<b>18</b>
			<b>Total 26/Week</b>			

II Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19EE2021	Elective-V Machine Learning Techniques	3	-	-	3
	19EE2022	Stochastic Control				
	19EE2023	Computational Methods				
2	19HS0824	Open Elective 1. Business Analytics	3	-	-	3
	19ME3121	2. Industrial Safety				
	19ME3021	3. Advances in Operations Research				
	19CE1028	4. Cost Management of Engineering Projects				
	19ME3022	5. Composite Materials				
	19EE2128	6. Waste to Energy				
3	19EE2024	Phase-I Dissertation	0	-	20	10
Contact Periods/Week			6		20	16
			Total 26/Week			

II Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19EE2025	Phase-II Dissertation	-	-	32	16
			-	-	32	16
Contact Periods/Week			Total / Week 32			16

**Control System (M.Tech)****Department of Electrical and Electronics Engineering (EEE)****I Year 1<sup>st</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2001	Mathematical Methods in Control	3	0	0	3
2	18EE2002	Non-Linear Systems	3	0	0	3
3	18EE2003	<u>Elective-I</u> Robotics and Automation	3	0	0	3
	18EE2004	Digital Control				
	18EE2005	Non Linear control				
4	18EE2006	<u>Elective-II</u> Systems Biology	3	0	0	3
	18EE2122	SCADA system and Applications				
	18EE2007	Design Aspects in Control				
5	18HS0823	Research Methodology and IPR	2	0	0	2
6	18EE2008	Control Systems Lab	0	0	4	2
7	18EE2009	Programmable Logic Controller(PLC) Lab ( Virtual Lab)	0	0	4	2
8	18HS0818	Audit- I English for Research Paper Writing	3	0	0	0
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
			17	0	8	
<b>Total /Week 25</b>						<b>18</b>

I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2010	Optimal Control Theory	3	0	0	3
2	18EE2011	Industrial Automation	3	0	0	3
3		<b>Elective-III</b>				
	18EE2012	Advance Control System	3	0	0	3
	18EE2013	Advanced Robotics				
	18EE2014	Adaptive Learning and Control				
4		<b>Elective-IV</b>				
	18EE2015	Model Reduction in Control				
	18EE2016	Robust Control				
	18EE2017	Networked and Multi-agent Control Systems	3	0	0	3
	18EE2116	Advanced Digital Signal Processing				
5	18EE2019	Mini Project with Seminar	1	0	4	2
6	18EE2020	Advanced Control Systems Lab	0	0	4	2
7	18EE2111	Industrial Automation Lab ( Virtual Lab)	0	0	4	2
8		<b>Audit-II</b>				
	18HS0829	Constitution of India				
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development through Life Enlightenment Skills.	3	0	0	0
			16	0	12	
<b>Total /Week 28</b>						<b>18</b>

II Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2021 18EE2022 18EE2023	<u>Elective-V</u> Machine Learning Techniques Stochastic Control Computational Methods	3	0	0	3
2	18HS0824 18ME3121 18ME3122 18CE1028 18ME3128 18EE2128	<u>Open Elective</u> 1. Business Analytics 2. Industrial Safety 3. Advances in Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy	3	0	0	3
3	18EE2024	Phase-I Dissertation	0	0	20	10
<b>Total/week 26</b>						<b>16</b>

II Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2025	Phase-II Dissertation	0	0	32	16
			0	0	32	16
<b>Total /Week 32</b>						<b>16</b>



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING  
M.Tech (CS)  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EE7501	System Theory	4	0	-	4
2.	16EC5501	Micro Controllers and Interfacing	4	0	-	4
3.	16EE7502	Digital Control Systems	4	0	-	4
4.	16EE7503	Soft Computing Techniques	4	0	-	4
<b>ELECTIVE-I</b>						
5.	16EE7504	Robot Modeling Control	4	0	-	4
6.	16EE7505	Advanced Instrumentation Systems				
<b>ELECTIVE- II</b>						
7.	16EE4301	Principles of Machine Modeling and Analysis	4	0	-	4
8.	16EE7506	Sensors and Signal Conditioning				
<b>LABORATORY</b>						
10.	16EE7507	Control System Lab	-	-	4	2
Contact periods / week			24	0	4	26
			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EE7508	Process Dynamic and Control	4	0	-	4
2.	16EE7509	Non-Linear Control Theory	4	0	-	4
3.	16EE7510	Optimal Control Theory	4	0	-	4
4.	16EE7511	Advanced Digital Signal Processing	4	0	-	4
<b>ELECTIVE- III</b>						
5.	16EE7512	Adaptive Learning and Control	4	0	-	4
6.	16EE7513	Robust Control				
<b>ELECTIVE- IV</b>						
7.	16EE7514	Power Plant Instrumentation	4	0	-	4
8.	16EE7515	Industrial Instrumentation				
<b>LABORATORY 1</b>						
9.	16EE7516	Advanced Control Systems Lab	-	-	4	2
Contact Periods / Week			24	0	4	26
			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16EE7517	Seminar	2
2	16EE7518	Project work	16

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)  
Power Electronics (M .Tech):  
Department of Electrical and Electronics Engineering (EEE)**

**I Year 1 Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20EE2101	Electric Drives Systems	3	-	-	3
3	20EE2102	Modelling and Analysis of Electrical Machines	3	-	-	3
<b>Programme Elective (PE)-I</b>						
4	20EE2103	Advanced Power Electronic Circuits	3	-	-	3
	20EE2104	Optimal and Adaptive Control				
	20EE2105	Power Quality				
<b>Programme Elective (PE)-II</b>						
5	20EE2107	Static VAR Controllers and Harmonic Filtering	3	-	-	3
	20EE2108	PWM Converters and Applications				
	20EE2109	Energy Auditing, Conservation & Management				
6	20EE2110	Power Electronics Simulation Lab	-	-	4	2
7	20EE2111	Industrial Automation Lab (Virtual Lab)	-	-	4	2
<b>Audit Course- I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/Week</b>			16	-	8	18
			<b>Total 24/Week</b>			



I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	20EE2112	Power Electronic Converters	3	-	-	3
2	20EE2113	Digital Control of Power Electronic and Drive Systems	3	-	-	3
<b>Programme Elective (PE)-III</b>						
3	20EE2114	Switched Mode and Resonant Converters	3	-	-	3
	20EE2115	Industrial Load Modeling and Control				
	20EE2116	Advanced Digital Signal Processing				
<b>Programme Elective (PE)-IV</b>						
4	20EE2117	Advanced Microcontroller based Systems	3	-	-	3
	20EE2118	Distributed Generation				
	20EE2119	Smart Grids				
5	20EE2120	Mini Project	-	-	4	2
6	20EE2121	Power Converters Lab	-	-	4	2
7	20EE2122	Industrial Electric Drives Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course- II</b>						
8	20HS0829	Constitution of India	2	-	-	-
<b>Contact Periods/Week</b>			14	-	12	<b>18</b>
			<b>Total 26/Week</b>			

**II Year 1<sup>st</sup> Semester**

S.No.	Course Code	Subject	L	T	P	C
1	20EE2123	<u>Programme Elective-I</u> SCADA Systems and Applications	3	0	0	3
	20EE2124	FACTS and Custom power Devices				
	20EE2125	HVDC Transmission Systems				
2	20HS0824	<u>Open Elective-I</u> Business Analytics	3	0	0	3
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20CE1028	Cost Management of Engineering Projects				
	20ME3028	Composite Materials				
	20EE2128	Waste to Energy				
3	20EE2126	Phase-I Dissertation	0	0	20	10
Contact Periods / Week			6	0	20	
			<b>Total/Week 26</b>			
Total Credits						<b>16</b>

**II Year 2<sup>nd</sup> Semester**

S.No.	Course Code	Subject	L	T	P	C
1	20EE2127	Phase-II Dissertation	0	0	32	16
Contact Periods / Week				0	32	
			<b>Total/Week 32</b>			
Total Credits						<b>16</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)  
Power Electronics (M .Tech):  
Department of Electrical and Electronics Engineering (EEE)**

**I Year 1 Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19EE2101	Electric Drives Systems	3	-	-	3
3	19EE2102	Modeling and Analysis of Electrical Machines	3	-	-	3
<b>Programme Elective (PE)-I</b>						
4	19EE2103	Advanced Power Electronic Circuits	3	-	-	3
	19EE2104	Optimal and Adaptive Control				
	19EE2105	Power Quality				
<b>Programme Elective (PE)-II</b>						
5	19EE2107	Static VAR Controllers and Harmonic Filtering	3	-	-	3
	19EE2108	PWM Converters and Applications				
	19EE2109	Energy Management				
6	19EE2110	Power Electronics Simulation Lab	-	-	4	2
7	19EE2111	Industrial Automation Lab (Virtual Lab)	-	-	4	2
<b>Audit Course- I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/Week</b>			16	-	8	18
			<b>Total 24/Week</b>			

I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	19EE2112	Power Electronic Converters	3	-	-	3
2	19EE2113	Digital Control of Power Electronic and Drive Systems	3	-	-	3
<b>Programme Elective (PE)-III</b>						
3	19EE2114	Switched Mode and Resonant Converters	3	-	-	3
	19EE2115	Industrial Load Modeling and Control				
	19EE2116	Advanced Digital Signal Processing				
<b>Programme Elective (PE)-IV</b>						
4	19EE2117	Advanced Microcontroller based Systems	3	-	-	3
	19EE2118	Distributed Generation				
	19EE2119	Smart Grids				
5	19EE2120	Mini Project	-	-	4	2
6	19EE2121	Power Converters Lab	-	-	4	2
7	19EE2122	Industrial Electric Drives Lab ( Virtual Lab)	-	-	4	2
<b>Audit Course- II</b>						
8	19HS0829	Constitution of India	2	-	-	-
<b>Contact Periods/Week</b>			14	-	12	<b>18</b>
			<b>Total 26/Week</b>			

**II Year 1<sup>st</sup> Semester**

S.No.	Course Code	Subject	L	T	P	C
1	19EE2123	<u>Programme Elective-I</u> SCADA Systems and Applications	3	0	0	3
	19EE2124	FACTS and Custom power Devices				
	19EE2125	HVDC Transmission Systems				
2	19HS0824	<u>Open Elective-I</u> Business Analytics	3	0	0	3
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19CE1028	Cost Management of Engineering Projects				
	19ME3022	Composite Materials				
	19EE2128	Waste to Energy				
3	19EE2126	Phase-I Dissertation	0	0	20	10
Contact Periods / Week			6	0	20	
			<b>Total/Week 26</b>			
Total Credits						<b>16</b>

**II Year 2<sup>nd</sup> Semester**

S.No.	Course Code	Subject	L	T	P	C
1	19EE2127	Phase-II Dissertation	0	0	32	16
Contact Periods / Week				0	32	
			<b>Total/Week 32</b>			
Total Credits						<b>16</b>

**Power Electronics (M.Tech):**  
**Department of Electrical and Electronics Engineering (EEE)**

**I Year 1<sup>st</sup> Semester**

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2101	Electric Drives System	3	0	0	3
2	18EE2102	Modeling and Analysis of Electrical Machines	3	0	0	3
3	18EE2103	<u>Elective-I</u> Advanced Power Electronic Circuits	3	0	0	3
	18EE2104	Optimal and Adaptive Control				
	18EE2105	Power Quality				
	18EE2106	Dynamics of Electrical Machines				
4	18EE2107	<u>Elective-II</u> Static VAR Controllers and Harmonic Filtering	3	0	0	3
	18EE2108	PWM converter and Applications				
	18EE2109	Power Semiconductor Devices & Modeling				
5	18HS0823	Research Methodology and IPR	2	0	0	2
6	18EE2110	Power Electronics Simulation Lab	0	0	4	2
7	18EE2111	Industrial Automation Lab (Virtual Lab)	0	0	4	2
8	18HS0818	Audit I English for Research Paper Writing	3	0	0	0
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
			17	0	8	
<b>Total/Week 25</b>						18

I Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2112	Power Electronic Converters	3	0	0	3
2	18EE2113	Digital Control of Power Electronic and Drive Systems	3	0	0	3
3	18EE2114	<u>Elective-III</u> Switched Mode and Resonant Converters	3	0	0	3
	18EE2115	Industrial Load Modeling and Control				
	18EE2116	Advanced Digital Signal Processing				
4	18EE2117	<u>Elective-IV</u> Advanced Microcontroller based Systems	3	0	0	3
	18EE2118	Distributed Generation				
	18EE2119	Smart Grids				
5	18EE2120	Mini Project with Seminar	1	0	4	2
6	18EE2121	Power Converters Lab	0	0	4	2
7	18EE2122	Industrial Electric Drives Lab ( Virtual Lab)	0	0	4	2
8	18HS0829	Audit II Constitution of India	3	0	0	0
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development through Life Enlightenment Skills.				
			16	0	12	
<b>Total/Week 28</b>						<b>18</b>

II Year 1<sup>st</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2123 18EE2124 18EE2125	<u>Elective-V</u> SCADA Systems and Applications FACTS and Custom Power Devices HVDC Transmission Systems	3	0	0	3
2	18HS0824 18ME3121 18ME3122 18CE1028  18ME3128 18EE2128	<u>Open Elective</u> 1. Business Analytics 2. Industrial Safety 3. Advances in Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy	3	0	0	3
3	18EE2126	Phase-I Dissertation	0	0	20	10
			6	0	20	
<b>Total/Week 26</b>						<b>16</b>

II Year 2<sup>nd</sup> Semester

S. No.	Subject Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	Lab/ Practice	
1	18EE2127	Phase-II Dissertation	0	0	32	16
				0	32	16
<b>Total/Week 32</b>						<b>16</b>





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING  
M.Tech (PE)  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EE4301	Principles of Machine Modeling and Analysis	4	0	-	4
2.	16EC5501	Micro Controllers and Interfacing	4	0	-	4
3.	16EE7501	System Theory	4	0	-	4
4.	16EE4302	Analysis of Power Electronic Converters	4	0	-	4
5.	16EE4303	Power Electronic Control of DC Drives	4	0	-	4
<b>ELECTIVE-I</b>						
6.	16EE4304	Advanced Digital Signal Processing	4	0	-	4
7.	16EE4305	Neural Networks and Fuzzy Logic				
<b>LABORATORY</b>						
8.	16EE4306	Power Converters-I Lab	-	-	4	2
Contact periods / week			24	0	4	26
			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EE4307	Power Electronic Control of AC Drives	4	0	-	4
2.	16EE4308	Advanced Power Semiconductor Devices & Protection	4	0	-	4
3.	16EE4309	Flexible AC Transmission Systems	4	0	-	4
4.	16EE4310	Modern Power Electronics	4	0	-	4
5.	16EE4311	HVDC Transmission	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16EE4312	Special Machines	4	0	-	4
7.	16EE4313	Energy Auditing Conversation and Management				
<b>LABORATORY 1</b>						
8.	16EE4314	Power Converters-II Lab	-	-	4	2
Contact Periods / Week			24	0	4	26
			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16EE4315	Seminar	2
2	16EE4316	Project work	16

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
**(AUTONOMOUS)**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MASTER OF TECHNOLOGY**  
**COMPUTER AIDED DESIGN AND MANUFACTURING (ME)**  
**COURSE STRUCTURE (I& II YEAR)**

**I YEAR I SEMESTER**

S. No	COURSECODE	SUBJECT	L	T	P	C
1.	20HS0823	Research Methodology and IPR	2	-	-	2
2.	20HS0840	Computational Methods	3	-	-	3
3.	20ME3001	Computer Integrated Manufacturing	3	-	-	3
<b>PROGRAMME ELECTIVE –I</b>						
4.	20ME3011	Geometric Modeling				
	20ME3012	CNC Technology & Programming	3	-	-	3
	20ME3013	Additive Manufacturing and Tooling				
<b>PROGRAMME ELECTIVE –II</b>						
5.	20ME3014	Quality Engineering and Manufacturing	3	-	-	3
	20ME3015	Computer Aided Process Planning				
	20ME3016	Mechanical Behaviour of Materials				
6.	20ME3002	Computer Aided Design Lab	-	-	4	2
7.	20ME3003	Computer Modeling Lab	-	-	4	2
<b>AUDIT COURSE-1</b>						
8.	20HS0818	English for Research Paper Writing	3	-	-	-
Contact periods/week			17	-	8	18
			<b>Total/Week</b>			
			25			

**I YEAR II SEMESTER**

S.No	COURSECODE	SUBJECT	L	T	P	C
1.	20ME3004	Finite Element Methods	3	-	-	3
2.	20ME3005	Rapid Prototyping	3	-	-	3
<b>PROGRAMME ELECTIVE -III</b>						
3.	20ME3017	Advances in Manufacturing Technology	3	-	-	3
	20ME3018	Advanced Optimization Techniques				
	20ME3019	Product Life Cycle Management				
<b>PROGRAMME ELECTIVE-IV</b>						
4.	20ME3020	Computer Graphics	3	-	-	3
	20ME3021	Robotics				
	20ME3022	Non Destructive Testing				
5.	20ME3006	Manufacturing Engineering lab (Virtual Lab)	-	-	4	2
6.	20ME3007	Computer Aided Analysis Lab	-	-	4	2
<b>AUDIT COURSE-II</b>						
7.	20HS0825	Constitution of India	3	-	-	-
8.	20ME3008	Mini-Project	-	-	4	2
Contact periods/week			<b>15</b>	<b>-</b>	<b>12</b>	<b>18</b>
			<b>Total/Week 27</b>			

**II YEAR I SEMESTER**

S. No	COURSE CODE	SUBJECT	L	T	P	C
<b>PROGRAMME ELECTIVE-V</b>						
1.	20ME3023	Mechatronics				
	20ME3024	Mechanics of Composites	3	-	-	3
	20ME3025	Industrial Robotics and Expert Systems				
<b>OPEN ELECTIVE</b>						
2.	20HS0824	Business Analytics				
	20CE1028	Cost Management of Engineering Projects				
	20EE2128	Waste to Energy				
	20ME3026	Industrial Safety	3	-	-	3
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
3.	20ME3009	Dissertation Phase – I	-	-	20	10
Contact periods/week			6	-	20	16
			<b>Total/Week 26</b>			

**II YEAR II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P	C
1	20ME3010	Dissertation Phase – II	-	-	32	16
Contact periods/week			-	-	32	16
			<b>Total/Week 32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**MASTER OF TECHNOLOGY**

**COMPUTER AIDED DESIGN AND MANUFACTURING (ME)**

**COURSE STRUCTURE (FOR I & II YEAR)**

**I YEAR I SEMESTER**

S. No	COURSECODE	SUBJECT	L	T	P	C
1.	19HS0823	Research Methodology and IPR	2	-	-	2
2.	19HS0845	Computational Methods	3	-	-	3
3.	19ME3001	Computer Integrated Manufacturing	3	-	-	3
<b>Programme Elective -I</b>						
4.	19ME3011	Geometric Modeling				
	19ME3012	CNC Technology & Programming	3	-	-	3
	19ME3023	Additive Manufacturing and Tooling				
<b>Programme Elective -II</b>						
5.	19ME3013	Quality Engineering and Manufacturing	3	-	-	3
	19ME3014	Computer Aided Process Planning				
	19ME3024	Mechanical Behaviour Of Materials				
6.	19ME3002	Computer Aided Design Lab	-	-	4	2
7.	19ME3003	Computer Modeling Lab	-	-	4	2
<b>Audit Course-1</b>						
8.	19HS0818	English for Research Paper Writing	2	-	-	-
		Contact periods/week	<b>16</b>	<b>-</b>	<b>8</b>	<b>18</b>
		<b>Total/Week</b>	<b>24</b>			

**I YEAR II SEMESTER**

S.No	COURSECODE	SUBJECT	L	T	P	C
1.	19ME3004	Finite Element Methods	3	-	-	3
2.	19ME3005	Rapid Prototyping	3	-	-	3
<b>PROGRAMME ELECTIVE -III</b>						
3.	19ME3015	Advances in Manufacturing Technology	3	-	-	3
	19ME3016	Advanced Optimization Techniques				
	19ME3025	Product Life Cycle Management				
<b>PROGRAMME ELECTIVE-IV</b>						
4.	19ME3017	Computer Graphics	3	-	-	3
	19ME3018	Robotics				
	19ME3026	Non Destructive Testing				
5.	19ME3006	Manufacturing Engineering Lab (Virtual Lab)	-	-	4	2
6.	19ME3007	Computer Aided Analysis Lab	-	-	4	2
<b>AUDIT COURSE-II</b>						
7.	19HS0829	Constitution of India				
8.	19ME3008	Mini-Project	-	-	4	2
			<b>14</b>	<b>-</b>	<b>12</b>	<b>18</b>
Contact periods/week			<b>Total/Week 26</b>			

**II YEAR I SEMESTER**

S. No	COURSECODE	SUBJECT	L	T	P	C
<b>PROGRAMME ELECTIVE-V</b>						
1.	19ME3019	Mechatronics				
	19ME3020	Mechanics of Composites	3	-	-	3
	19ME3027	Industrial Robotics and Expert Systems				
<b>OPEN ELECTIVE</b>						
2.	19HS0824	Business Analytics				
	19CE1028	Cost Management of Engineering Projects				
	19EE2128	Waste to Energy	3	-	-	3
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
3.	19ME3009	Dissertation Phase – I	-	-	20	10
Contact periods/week			6	-	20	16
			<b>Total/Week 26</b>			

**II YEAR II SEMESTER**

S No.	COURSECODE	SUBJECT	L	T	P	C
1.	19ME3010	Dissertation Phase – II	-	-	32	16
Contact periods/week			-	-	32	16
			<b>Total/Week 32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**

**Draft Course Structure (For I& II year)****Master of Technology****Computer Aided Design and Manufacturing (ME)****I YEAR I SEMESTER**

S. No	COURSECODE	SUBJECT	L	T	P	C
1	18HS0845	Computational Methods	3	0	0	3
2	18ME3001	Computer Integrated Manufacturing	3	0	0	3
<b>PROFESSIONAL COURSE ELECTIVE-I</b>						
3	18ME3011	Geometric Modeling	3	0	0	3
	18ME3012	CNC Technology & Programming				
<b>PROFESSIONAL COURSE ELECTIVE-II</b>						
4	18ME3013	Quality Engineering and Manufacturing	3	0	0	3
	18ME3014	Computer Aided Process Planning				
5	18ME3002	Computer Aided Design Lab	0	0	4	2
6	18ME3003	Computer Modeling Lab	0	0	4	2
7	18HS0823	Research Methodology and IPR	2	0	0	2
<b>AUDIT COURSE-1</b>						
8	18HS0818	English for Research Paper Writing	2	0	0	0
	18CE1029	Disaster Management				
	18HS0825	Sanskrit For Technical Knowledge				
	18HS0826	Value Education				
Contact periods/week			<b>16</b>	<b>0</b>	<b>8</b>	<b>18</b>
			<b>Total/Week 24</b>			



**I YEAR II SEMESTER**

S.No	COURSECODE	SUBJECT	L	T	P	C
1.	18ME3004	Finite Element Methods	3	0	0	3
2.	18ME3005	Rapid Prototyping	3	0	0	3
<b>PROFESSIONAL COURSE ELECTIVE-III</b>						
3.	18ME3015	Advances in Manufacturing Technology	3	0	0	3
	18ME3016	Advanced Optimization Techniques				
<b>PROFESSIONAL COURSE ELECTIVE-IV</b>						
4	18ME3017	Computer Graphics	3	0	0	3
	18ME3018	Robotics				
5	18ME3006	Virtual lab in Manufacturing Engineering	0	0	4	2
6	18ME3007	Computer Aided Analysis Lab	0	0	4	2
<b>AUDIT COURSE-II</b>						
7	18HS0829	Constitution of India	2	0	0	0
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development through Life Enlightenment Skills				
8	18ME3008	Mini-Project	0	0	4	2
Contact periods/week			<b>14</b>	<b>0</b>	<b>12</b>	<b>18</b>
			<b>Total/Week 26</b>			

**II YEAR I SEMESTER**

S. No	COURSECODE	SUBJECT	L	T	P	C
<b>PROFESSIONAL COURSE ELECTIVE-V</b>						
1	18ME3019	Mechatronics	3	0	0	3
	18ME3020	Mechanics of Composites				
<b>OPEN ELECTIVE</b>						
2	18HS0824	Business Analytics	3	0	0	3
	18ME3121	Industrial Safety				
	18ME3021	Advances in Operations Research				
	18CE1028	Cost Management of Engineering Projects				
	18ME3022	Composite Materials				
	18EE2128	Waste to Energy				
3	18ME3009	Dissertation Phase – I	0	0	20	10
contact periods/week			6	0	20	16
			<b>Total/Week 26</b>			

**II YEAR II SEMESTER**

S No.	COURSECODE	SUBJECT	L	T	P	C
1	18ME3010	Dissertation Phase – II	0	0	32	16
Contact periods/week			0	0	32	16
			<b>Total/Week 32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**M.Tech (CAD/CAM)**  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16ME0401	Finite Element Methods	4	0	-	4
2.	16ME0402	Computer Integrated Manufacturing	4	0	-	4
3.	16ME0403	Geometric Modeling	4	0	-	4
4.	16ME0404	Advances in Manufacturing Technology	4	0	-	4
5.	16ME0405	Computational Methods	4	0	-	4
<b>ELECTIVE-I</b>						
6.	16ME0406	Quality Engineering and Manufacturing				
7.	16ME0407	Computer Aided Process Planning	4	0	-	4
8.	16ME0408	Designs For Manufacturing				
<b>LABORATORY</b>						
9.	16ME0409	Modeling and CNC Lab	-	-	4	2
Contact periods / week			24	0	4	26
			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16ME0410	Advanced Optimization Techniques	4	0	-	4
2.	16ME0411	Computer Graphics	4	0	-	4
3.	16ME0412	Robotics	4	0	-	4
4.	16ME0413	CNC Technology & programming	4	0	-	4
5.	16ME0414	Mechatronics	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16ME0406	Quality Engineering and Manufacturing				
7.	16ME0407	Computer Aided Process Planning	4	0	-	4
8.	16ME0408	Designs For Manufacturing				
<b>LABORATORY 1</b>						
9.	16ME0418	Computer Aided Design Lab	-	-	4	2
Contact Periods / Week			24	0	4	26
			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16ME0419	Seminar	2
2	16ME0420	Project work	16

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
**(AUTONOMOUS)**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MASTER OF TECHNOLOGY**  
**THERMAL ENGINEERING (ME)**  
**COURSE STRUCTURE (I & II YEAR)**

**I YEAR I SEMESTER**

S NO.	COURSE CODE	SUBJECT	L	T	P	C
1.	20HS0823	Research Methodology and IPR	2	-	-	2
2.	20ME3101	Thermodynamics and Combustion	3	-	-	3
3.	20ME3102	Advanced Fluid Dynamics	3	-	-	3
<b>PROGRAMME ELECTIVE-I</b>						
4.	20ME3112	Nuclear Engineering	3	-	-	3
	20ME3113	Energy Conservation and Management				
	20ME3114	Energy Management in Thermal Systems				
<b>PROGRAMME ELECTIVE-II</b>						
5.	20ME3115	Air Conditioning System Design	3	-	-	3
	20ME3116	Jet Propulsion and Rocketry				
	20ME3117	Fuels and Combustion				
6.	20ME3103	Thermal Engineering Lab	-	-	4	2
7.	20ME3104	Computer Aided Analysis Lab	-	-	4	2
<b>AUDIT COURSE-I</b>						
8.	20HS0818	English for Research Paper writing	3	-	-	-
Contact Periods / Week			17	-	8	18
			<b>Total/Week 25</b>			

**I YEAR II SEMESTER**

S NO.	COURSE CODE	SUBJECT	L	T	P	C
1.	20ME3105	Advanced Heat Transfer	3	-	-	3
2.	20ME3106	Steam Engineering	3	-	-	3
<b>PROGRAMME ELECTIVE-III</b>						
3.	20ME3118	Refrigeration and Cryogenics	3	-	-	3
	20ME3119	Design of Heat Exchangers				
	20ME3120	Cryogenic Engineering				
<b>PROGRAMME ELECTIVE-IV</b>						
4.	20ME3121	Computational Fluid Dynamics	3	-	-	3
	20ME3122	Modeling of IC Engines				
	20ME3123	Instrumentation for Thermal Engineering				
5.	20ME3107	Computational Fluid Dynamics Lab	-	-	4	2
6.	20ME3108	Thermal Engineering Lab (Virtual Lab)	-	-	4	2
7.	20ME3109	Mini-Project	-	-	4	2
<b>AUDIT COURSE-II</b>						
8.	20HS0829	Constitution of India	3	-	-	-
Contact Periods / Week			15	-	12	18
			<b>Total/Week 27</b>			

**II YEAR I SEMESTER**

S. No	COURSE CODE	SUBJECT	L	T	P	C
<b>PROGRAMME ELECTIVE-V</b>						
1.	20ME3124	Design of Solar and Wind System	3	-	-	3
	20ME3125	Finite Element Methods in Thermal Engineering				
	20ME3126	Thermal Measurements and Process Control				
<b>OPEN ELECTIVE</b>						
2.	20HS0824	Business Analytics	3	-	-	3
	20CE1028	Cost Management of Engineering Projects				
	20EE2128	Waste to Energy				
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
3.	20ME3110	Dissertation Phase – I	-	-	20	10
Contact periods/week			<b>6</b>	<b>-</b>	<b>20</b>	<b>16</b>
			<b>Total/Week 26</b>			

**II YEAR II SEMESTER**

S.No	COURSE CODE	SUBJECT	L	T	P	C
1.	20ME3111	Dissertation Phase – II	-	-	32	16
Contact periods/week			-	-	32	<b>16</b>
			<b>Total/Week 32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**MASTER OF TECHNOLOGY**  
**THERMAL ENGINEERING (ME)**  
**COURSE STRUCTURE (I& II YEAR)**

**I YEAR I SEMESTER**

S NO.	COURSE CODE	SUBJECT	L	T	P	C
1.	19HS0823	Research Methodology and IPR	2	-	-	2
2.	19ME3101	Thermodynamics and Combustion	3	-	-	3
3.	19ME3102	Advanced Fluid Dynamics	3	-	-	3
<b>Programme Elective-I</b>						
4.	19ME3112	Nuclear Engineering	3	-	-	3
	19ME3113	Energy Conservation and Management				
	19ME3122	Energy Management in Thermal Systems				
<b>Programme Elective-II</b>						
5.	19ME3114	Air Conditioning System Design	3	-	-	3
	19ME3115	Jet Propulsion and Rocketry				
	19ME3123	Fuels and Combustion				
6.	19ME3103	Thermal Engineering Lab	-	-	4	2
7.	19ME3104	Computer Aided Analysis Lab	-	-	4	2
<b>Audit Course-I</b>						
8.	19HS0818	English for Research Paper writing	2	-	-	-
Contact Periods / Week			<b>16</b>	<b>-</b>	<b>8</b>	<b>18</b>
			<b>Total/Week</b>			
			<b>24</b>			

**I YEAR II SEMESTER**

S NO.	COURSE CODE	SUBJECT	L	T	P	C
1.	19ME3105	Advanced Heat Transfer	3	-	-	3
2.	19ME3106	Steam Engineering	3	-	-	3
<b>Programme Elective-III</b>						
3.	19ME3116	Refrigeration and Cryogenics				
	19ME3117	Design of Heat Exchangers	3	-	-	3
	19ME3124	Cryogenic Engineering				
<b>Programme Elective-IV</b>						
4.	19ME3118	Computational Fluid Dynamics				
	19ME3119	Modeling of IC Engines	3	-	-	3
	19ME3125	Instrumentation for Thermal Engineering				
5.	19ME3107	Computational Fluid Dynamics Lab	-	-	4	2
6.	19ME3108	Thermal Engineering Lab (Virtual Lab)	-	-	4	2
<b>Audit Course-II</b>						
7.	19HS0829	Constitution of India	2	-	-	-
8.	19ME3109	Mini-Project	-	-	4	2
Contact Periods / Week			<b>14</b>	<b>-</b>	<b>12</b>	<b>18</b>
			<b>Total/Week</b>			

**II YEAR I SEMESTER**

S. No	COURSE CODE	SUBJECT	L	T	P	C
<b>PROGRAMME ELECTIVE-V</b>						
1.	19ME3120	Design of Solar and Wind System				
	19ME3126	Finite Element Methods in Thermal Engineering	3	-	-	3
	19ME3127	Thermal Measurements and Process Control				
<b>OPEN ELECTIVE</b>						
2.	19HS0824	Business Analytics				
	19CE1028	Cost Management of Engineering Projects				
	19EE2128	Waste to Energy	3	-	-	3
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
3.	19ME3110	Dissertation Phase – I	-	-	20	10
Contact periods/week			6	-	20	16
			<b>Total/Week 26</b>			

**II YEAR II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P	C
1.	19ME3111	Dissertation Phase – II	-	-	32	16
Contact periods/week			-	-	32	16
			<b>Total/Week 32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**



**Draft Course Structure (for I & II year)****Master of Technology****Thermal Engineering (ME)****I YEAR I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P	C
1.	18ME3101	Thermodynamics and Combustion	3	0	0	3
2.	18ME3102	Advanced Fluid Dynamics	3	0	0	3
<b>PROFESSIONAL ELECTIVE COURSE(PEC)-I</b>						
3.	18ME3112	Nuclear Engineering	3	0	0	3
	18ME3113	Energy Conservation and Management				
<b>PROFESSIONAL ELECTIVE COURSE(PEC)-II</b>						
4.	18ME3114	Air Conditioning System Design	3	0	0	3
	18ME3115	Jet Propulsion and Rocketry				
5.	18ME3103	Thermal Engineering Lab	0	0	4	2
6.	18ME3104	Computer Aided Analysis Lab	0	0	4	2
7.	18HS0823	Research Methodology and IPR	2	0	0	2
<b>AUDIT COURSE-1</b>						
8	18HS0818	English for Research Paper writing	2	0	0	0
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value education				
Contact Periods / Week			<b>16</b>	<b>0</b>	<b>8</b>	<b>18</b>
			<b>Total/Week</b>		<b>24</b>	

**I YEAR II SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P	C
1	18ME3105	Advanced Heat Transfer	3	0	0	3
2	18ME3106	Steam Engineering	3	0	0	3
<b>PROFESSIONAL ELECTIVE COURSE(PEC)-III</b>						
3	18ME3116	Refrigeration and Cryogenics	3	0	0	3
	18ME3117	Design of Heat Exchangers				
<b>PROFESSIONAL ELECTIVE COURSE(PEC)-IV</b>						
4	18ME3118	Computational Fluid Dynamics	3	0	0	3
	18ME3119	Modelling of IC Engines				
5	18ME3107	Computational Fluid Dynamics Lab	0	0	4	2
6	18ME3108	Thermal Engineering Virtual Lab	0	0	4	2
<b>AUDIT COURSE-II</b>						
7	18HS0829	Constitution of India	2	0	0	0
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development through Life Enlightenment Skills				
8	18ME3109	Mini-Project	0	0	4	2
Contact Periods / Week			<b>14</b>	<b>0</b>	<b>12</b>	<b>18</b>
			<b>Total/Week</b>		<b>24</b>	

**II YEAR I SEMESTER**

S No.	COURSE CODE	SUBJECT	L	T	P	C
<b>PROFESSIONAL ELECTIVE COURSE(PEC)-V</b>						
1	18ME3120	Design of Solar and Wind System	3	0	0	3
	18HS0839	Advanced Mathematical Methods in Engineering				
<b>OPEN ELECTIVE</b>						
2	18HS0824	Business Analytics	3	0	0	3
	18ME3121	Industrial Safety				
	18ME3021	Advances in Operations Research				
	18CE1028	Cost Management of Engineering Projects				
	18ME3022	Composite Materials				
	18EE2128	Waste to Energy				
3	18ME3110	Dissertation Phase – I	0	0	20	10
Contact Periods / Week			6	0	20	16
			<b>Total/Week</b>			
			<b>26</b>			

**II YEAR II SEMESTER**

S No.	COURSECODE	SUBJECT	L	T	P	C
1	18ME3111	Dissertation Phase - II	0	0	32	16
Contact Periods / Week			0	0	32	16
			<b>Total/Week</b>			
			<b>32</b>			

**Total Number of Credits= 18 +18+16+16 = 68**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF MECHANICAL ENGINEERING  
**M.Tech (Thermal Engineering)**  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16ME8801	Advanced Thermodynamics	4	0	-	4
2.	16ME8802	Advanced Heat & Mass Transfer	4	0	-	4
3.	16ME8803	Turbo Machines	4	0	-	4
4.	16ME8804	Fuels, Combustion & Environment	4	0	-	4
5.	16ME8805	FEA in Thermal Engineering	4	0	-	4
<b>ELECTIVE-I</b>						
6.	16ME8806	Refrigeration & Air Conditioning				
7.	16ME8807	Equipment design for Thermal Systems	4	0	-	4
8.	16ME8808	Optimization Techniques & its Applications				
<b>LABORATORY</b>						
9.	16ME8809	Advanced Thermal Engineering Lab	-	-	4	2
Contact periods / week			24	0	4	26
			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16ME8810	Energy Management	4	0	-	4
2.	16ME8811	Advanced I.C. Engines	4	0	-	4
3.	16ME8812	Computational Fluid Dynamics	4	0	-	4
4.	16ME8813	Thermal Measurements and Process Controls	4	0	-	4
5.	16ME8814	Alternative Energy Sources	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16ME8815	Cryogenics Engineering				
7.	16ME8816	Thermal & Nuclear Power Plants	4	0	-	4
8.	16ME8817	Jet Propulsion & Rocketry				
<b>LABORATORY 1</b>						
9.	16ME8818	Computational Fluid Dynamics Lab	-	-	4	2
Contact Periods / Week			24	0	4	26
			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16ME8819	Seminar	2
2	16ME8820	Project work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR**  
(AUTONOMOUS)

**M.Tech. (Electronics & Communication Engineering)**  
**Specialization: Digital Electronics & Communication Systems**

**I M.Tech - I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20EC4001	Advanced Digital System Design	3	-	-	3
3	20EC4002	Advanced Digital Signal Processing	3	-	-	3
<b>Programme Elective - I</b>						
4	20EC4003	Antenna and Radiating Systems	3	-	-	3
	20EC4004	Digital Communication Techniques				
	20EC4005	DSP Processors & Architectures				
<b>Programme Elective - II</b>						
5	20EC4006	High Speed Networks	3	-	-	3
	20EC4007	Voice and Data Networks				
	20EC4008	Wireless Sensor Networks				
6	20EC4009	Advanced Digital Signal Processing Lab(Virtual Lab)	-	-	4	2
7	20EC4010	Advanced Digital System Design Lab	-	-	4	2
<b>Audit Course - I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M.Tech - II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	20EC4011	Wireless Communications	3	-	-	3
2	20EC4012	Coding Theory & Techniques	3	-	-	3
<b>Programme Elective - III</b>						
3	20EC4109	Introduction to IoT	3	-	-	3
	20EC4013	Adaptive Signal Processing				
	20EC4014	Cognitive Radio				
<b>Programme Elective - IV</b>						
4	20EC4015	Image & Video Processing	3	-	-	3
	20EC4016	Pattern Recognition and Machine learning				
	20EC4017	Detection & Estimation of Signals				
5	20EC4018	Advanced Communications Lab (Virtual Lab)	-	-	4	2
6	20EC4019	Image & Video Processing Lab	-	-	4	2
7	20EC4020	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	20HS0829	Constitution of India	2	-	-	-
Contact Periods / Week			14	-	12	18
			Total/Week:26			

## II M.Tech - I Sem

S.No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	20EC4021	Optical Networks				
	20EC4213	Testing & Testability	3	-	-	3
	20EC4022	RF and Microwave Circuit Design				
<b>Open Elective</b>						
2	20HS0824	Business Analytics				
	20CE1028	Cost Management of Engineering Projects				
	20EE2128	Waste to Energy	3	-	-	3
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
3	20EC4023	Dissertation Phase-I	-	-	20	10
Contact periods / Week			6	-	20	16
			Total/Week:26			

## II M.Tech - II Sem

S.No	Course Code	Course Name	L	T	P	Credits
1	20EC4024	Dissertation Phase -II	-	-	32	16
Contact periods / Week			Total/Week:32			16

**NOTE:** L- Lecture, T- Theory, P-Practical


**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**

(AUTONOMOUS)

**M.Tech. (Electronics and Communication Engineering)  
Specialization: Digital Electronics & Communication Systems**
**I M.Tech - I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19EC4001	Advanced Digital System Design	3	-	-	3
3	19EC4002	Advanced Digital Signal Processing	3	-	-	3
<b>Programme Elective – I</b>						
4	19EC4003	Antenna and Radiating Systems	3	-	-	3
	19EC4004	Digital Communication Techniques				
	19EC4005	DSP Processors & Architectures				
<b>Programme Elective –II</b>						
5	19EC4006	High Speed Networks	3	-	-	3
	19EC4007	Voice and Data Networks				
	19EC4008	Wireless Sensor Networks				
6	19EC4009	Advanced Digital Signal Processing Lab(Virtual Lab)	-	-	4	2
7	19EC4010	Advanced Digital System Design Lab	-	-	4	2
<b>Audit Course – I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M.Tech – II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	19EC4011	Wireless Communications	3	-	-	3
2	19EC4012	Coding Theory & Techniques	3	-	-	3
<b>Programme Elective – III</b>						
3	19EC4109	Introduction to IoT	3	-	-	3
	19EC4013	Adaptive Signal Processing				
	19EC4014	Cognitive Radio				
<b>Programme Elective – IV</b>						
4	19EC4015	Image & Video Processing	3	-	-	3
	19EC4016	Pattern Recognition and Machine learning				
	19EC4017	Detection & Estimation of Signals				
5	19EC4018	Advanced Communications Lab	-	-	4	2
6	19EC4019	Image & Video Processing Lab	-	-	4	2
7	19EC4020	Mini Project	-	-	4	2
<b>Audit Course – II</b>						
8	19HS0829	Constitution of India	2	-	-	-
Contact Periods / Week			14	-	12	18
			Total/Week: 26			

## II M.Tech - I Sem

S.No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	19EC4021	Optical Networks	3	-	-	3
	19EC4213	Testing & Testability				
	19EC4022	RF and Microwave Circuit Design				
<b>Open Elective</b>						
2	19HS0824	Business Analytics	3	-	-	3
	19CE1028	Cost Management of Engineering Projects				
	19EE2128	Waste to Energy				
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
3	19EC4023	DissertationPhase-I	-	-	20	10
Contact periods / Week			6	-	20	16
			Total/Week:26			

## II M.Tech - II Sem

S.No	Course Code	Course Name	L	T	P	Credits
1	19EC4024	Dissertation Phase- II	-	-	32	16
Contact periods / Week			Total/Week:32			16

**NOTE:** L- Lecture, T- Theory, P-Practical



**M.Tech. (Electronics & Communication Engineering)**  
**Specialization: Digital Electronics & Communication Systems**

**I M.Tech -I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4001	Advanced Digital System Design	3	-	-	3
2	18EC4002	Advanced Digital Signal Processing	3	-	-	3
<b>Program Elective I</b>						
3	18EC4003	Antenna and Radiating Systems				
	18EC4004	Digital Communication Techniques	3	-	-	3
	18EC4005	DSP Processors & Architectures				
<b>Program Elective II</b>						
4	18EC4006	High Speed Networks				
	18EC4007	Voice and Data Networks	3	-	-	3
	18EC4008	Wireless Sensor Networks				
5	18EC4009	Advanced Digital Signal Processing Lab(Virtual Lab)	-	-	4	2
6	18EC4010	Advanced Digital System Design Lab	-	-	4	2
7	18HS0823	Research Methodology and IPR	2	-	-	2
<b>Audit Course –I</b>						
8	18HS0818	English for Research Paper Writing				
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M.Tech -II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4011	Wireless Communications	3	-	-	3
2	18EC4012	Coding Theory & Techniques	3	-	-	3
<b>Program Elective III</b>						
3	18EC4109	Introduction to IoT				
	18EC4013	Adaptive Signal Processing	3	-	-	3
	18EC4014	Cognitive Radio				
<b>Program Elective IV</b>						
4	18EC4015	Image & Video Processing				
	18EC4016	Pattern Recognition and Machine learning	3	-	-	3
	18EC4017	Detection & Estimation of Signals				
5	18EC4018	Advanced Communications Lab (Virtual Lab)	-	-	4	2
6	18EC4019	Image & Video Processing Lab	-	-	4	2
7	18EC4020	Mini Project	-	-	4	2
<b>Audit Course – II</b>						
8	18HS0829	Constitution of India				
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development Through Life Enlightenment Skills.				
Contact Periods / Week			14	-	12	18
			Total/Week:26			

### II M.Tech -I Sem

S.No	Course Code	Course Name	L	T	P	Credits
<b>Program Elective V</b>						
1	18EC4021	Optical Networks				
	18EC4213	Testing & Testability	3	-	-	3
	18EC4022	RF and Microwave Circuit Design				
<b>Open Elective</b>						
2	18HS0824	Business Analytics				
	18ME3121	Industrial Safety				
	18ME3122	Advanced Operations Research				
	18CE1028	Cost Management of Engineering Projects	3	-	-	3
	18ME3123	Composite Materials				
	18EE2128	Waste to Energy				
3	18EC4023	Dissertation-I	-	-	20	10
Contact periods / Week			6	-	20	16
			Total/Week:26			

### II M.Tech -II Sem

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4024	Dissertation –II	-	-	32	16
Contact periods / Week			Total/Week:32			16

## List of Subjects

S.No	Course Code	Course Name
1.	18EC4001	Advanced Digital System Design
2.	18EC4002	Advanced Digital Signal Processing
3.	18EC4003	Antenna and Radiating Systems
4.	18EC4004	Digital Communication Techniques
5.	18EC4005	DSP Processors & Architectures
6.	18EC4006	High Speed Networks
7.	18EC4007	Voice and Data Networks
8.	18EC4008	Wireless Sensor Networks
9.	18EC4009	Advanced Digital Signal Processing Lab (Virtual Lab)
10.	18EC4010	Advanced Digital System Design Lab
11.	18HS0823	Research Methodology and IPR
12.	18HS0818	English for Research Paper Writing
13.	18CE1029	Disaster Management
14.	18HS0825	Sanskrit for Technical Knowledge
15.	18HS0826	Value Education
16.	18EC4011	Wireless Communications
17.	18EC4012	Coding Theory & Techniques
18.	18EC4109	Introduction to IoT
19.	18EC4013	Adaptive Signal Processing
20.	18EC4014	Cognitive Radio
21.	18EC4015	Image & Video Processing
22.	18EC4016	Pattern Recognition and Machine learning
23.	18EC4017	Detection & Estimation of Signals
24.	18EC4018	Advanced Communications Lab (Virtual Lab)
25.	18EC4019	Image & Video Processing Lab
26.	18EC4020	Mini Project
27.	18HS0829	Constitution of India
28.	18HS0827	Pedagogy Studies
29.	18HS0828	Stress Management by Yoga
30.	18HS0819	Personality Development through Life Enlightenment Skills.
31.	18EC4021	Optical Networks
32.	18EC4213	Testing & Testability
33.	18EC4022	RF and Microwave Circuit Design
34.	18HS0824	Business Analytics
35.	18HS0824	Business Analytics
36.	18ME3121	Industrial Safety
37.	18ME3122	Advanced Operations Research
38.	18CE1028	Cost Management of Engineering Projects
39.	18ME3123	Composite Materials
40.	18EC4023	Dissertation-I
41.	18EC4024	Dissertation –II



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
M.Tech DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS (DECS)  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EC3801	Digital System Design	4	-	-	4
2.	16EC3802	Advanced Digital Signal Processing	4	-	-	4
3.	16EC3803	Digital Communication Techniques	4	-	-	4
4.	16EC3804	Adaptive Signal Processing	4	-	-	4
5.	16EC5502	Embedded System Concepts	4	-	-	4
<b>ELECTIVE I</b>						
6.	16EC5503	Advanced Computer Architectures			-	
7.	16EC3805	DSP Processors & Architectures	4	-	-	4
8.	16EC5709	Low Power VLSI Design			-	
<b>LABORATORY</b>						
9.	16EC3806	Communications & Signal Processing Lab	-	-	4	2
Contact periods / week			24	-	4	<b>26</b>
			Total/Week		<b>28</b>	

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EC3807	Micro Computer System Design	4	-	-	4
2.	16EC3808	Image & Video Processing	4	-	-	4
3.	16EC3809	Wireless Communications	4	-	-	4
4.	16EC3810	Coding Theory & Techniques	4	-	-	4
5.	16EC3811	Detection & Estimation of Signals	4	-	-	4
<b>ELECTIVE II</b>						
6.	16EC3812	Hi-Speed Networks				
7.	16EC3813	Optical Networks	4	-	-	4
8.	16EC3814	Compression Techniques				
<b>LABORATORY</b>						
9.	16EC3815	Digital System Design Lab	-	-	4	2
Contact Periods / Week			24	-	4	<b>26</b>
			Total/Week		<b>28</b>	

**II YEAR (III & IV Semesters)**

S.No	Subject Code	Subject	Credits
1	16EC3816	Seminar	2
2	16EC3817	Project work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:PUTTUR**  
(AUTONOMOUS)

**M. Tech. (Electronics & Communication  
Engineering) Specialization: Embedded Systems**

**I M. Tech - I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20EC4101	Embedded System Design	3	-	-	3
3	20EC4102	Sensors and Actuators	3	-	-	3
<b>Programme Elective - I</b>						
4	20EC4103	Structural Digital System Design				
	20EC4209	FPGA Architectures & Applications	3	-	-	3
	20EC4104	Real Time Operating Systems				
<b>Programme Elective - II</b>						
5	20EC4105	Embedded Networking				
	20EC4011	Wireless Communications	3	-	-	3
	20EC4106	Internet Protocols				
6	20EC4107	Embedded System Design Lab	-	-	4	2
7	20EC4108	Structural Digital System Design Lab	-	-	4	2
<b>Audit Course - I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M. Tech - II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	20EC4109	Introduction to IoT	3	-	-	3
2	20EC4110	Advanced Microcontrollers	3	-	-	3
<b>Programme Elective - III</b>						
3	20EC4111	Hardware Software Co-Design				
	20EC4213	Testing & Testability	3	-	-	3
	20EC4112	Micro Electromechanical Systems				
<b>Programme Elective - IV</b>						
4	20EC4201	VLSI Technology				
	20EC4202	Digital IC Design	3	-	-	3
	20EC4008	Wireless Sensor Networks				
5	20EC4113	Internet of Things Lab	-	-	4	2
6	20EC4114	Microcontrollers & Interfacing Lab	-	-	4	2
7	20EC4115	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	20HS0829	Constitution of India	2	-	-	-
Contact periods / Week			14	-	12	18
			Total/Week:26			

## II M. Tech – I Sem

S.No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	20EC4002	Advanced Digital Signal Processing	3	-	-	3
	20EC4116	Radio Frequency Identification				
	20EC4117	System on Chip Architecture				
<b>Open Elective</b>						
2	20HS0824	Business Analytics	3	-	-	3
	20CE1028	Cost Management of Engineering Projects				
	20EE2128	Waste to Energy				
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
3	20EC4118	DissertationPhase-I	-	-	20	10
Contact periods / Week			6	-	20	16
			Total/Week:26			

## II M. Tech - II Sem

S.No	Course Code	Course Name	L	T	P	Credits
1	20EC4119	DissertationPhase-II	-	-	32	16
Contact periods / Week			Total/Week:32		16	

**NOTE:** L- Lecture, T- Theory, P-Practical


**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR**

(AUTONOMOUS)

**M.Tech. (Electronics and Communication Engineering)**
**Specialization: Embedded Systems**
**I M.Tech - I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19EC4101	Embedded System Design	3	-	-	3
3	19EC4102	Sensors and Actuators	3	-	-	3
<b>Programme Elective - I</b>						
4	19EC4103	Structural Digital System Design	3	-	-	3
	19EC4209	FPGA Architectures & Applications				
	19EC4104	Real Time Operating Systems				
<b>Programme Elective - II</b>						
5	19EC4105	Embedded Networking	3	-	-	3
	19EC4011	Wireless Communications				
	19EC4106	Internet Protocols				
6	19EC4107	Embedded System Design Lab	-	-	4	2
7	19EC4108	Structural Digital System Design Lab	-	-	4	2
<b>Audit Course - I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M. Tech - II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	19EC4109	Introduction to IoT	3	-	-	3
2	19EC4110	Advanced Microcontrollers	3	-	-	3
<b>Programme Elective - III</b>						
3	19EC4111	Hardware Software Co-Design	3	-	-	3
	19EC4213	Testing & Testability				
	19EC4112	Micro Electromechanical Systems				
<b>Programme Elective - IV</b>						
4	19EC4201	VLSI Technology	3	-	-	3
	19EC4202	Digital IC Design				
	19EC4008	Wireless Sensor Networks				
5	19EC4113	Internet of Things Lab	-	-	4	2
6	19EC4114	Microcontrollers & Interfacing Lab	-	-	4	2
7	19EC4115	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	19HS0829	Constitution of India	2	-	-	-
Contact periods / Week			14	-	12	18
			Total/Week:26			

## II M. Tech. – I Sem

S.No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	19EC4002	Advanced Digital Signal Processing	3	-	-	3
	19EC4116	Radio Frequency Identification				
	19EC4117	System on Chip Architecture				
<b>Open Elective</b>						
2	19HS0824	Business Analytics	3	-	-	3
	19CE1028	Cost Management of Engineering Projects				
	19EE2128	Waste to Energy				
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
3	19EC4118	Dissertation Phase-I	-	-	20	10
<b>Contact periods / Week</b>			6	-	20	16
			Total/Week:26			

## II M. Tech. – II Semester

S.No	Course Code	Course Name	L	T	P	Credits
1	19EC4119	Dissertation Phase -II	-	-	32	16
<b>Contact periods / Week</b>			Total/Week:32			16

**NOTE:** L- Lecture, T- Theory, P-Practical



**M. Tech. (Electronics & Communication Engineering)**  
**Specialization: Embedded Systems**

**I M. Tech -I Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4101	Embedded System Design	3	--	--	3
2	18EC4102	Sensors and Actuators	3	--	--	3
<b>Program Elective I</b>						
3	18EC4103	Structural Digital System Design	3	--	--	3
	18EC4209	FPGA Architectures & Applications				
	18EC4104	Real Time Operating Systems				
<b>Program Elective II</b>						
4	18EC4105	Embedded Networking	3	--	--	3
	18EC4011	Wireless Communications				
	18EC4106	Internet Protocols				
5	18EC4107	Embedded System Design Lab	--	--	4	2
6	18EC4108	Structural Digital System Design Lab	--	--	4	2
7	18HS0823	Research Methodology and IPR	2		--	2
<b>Audit Course - I</b>						
8	18HS0818	English for Research Paper Writing	2	-	-	-
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
Contact Periods / Week			16	-	8	18
			Total/Week: 24			

**I M. Tech -II Sem**

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4109	Introduction to IoT	3	--	--	3
2	18EC4110	Advanced Microcontrollers	3	--	--	3
<b>Program Elective III</b>						
3	18EC4111	Hardware Software Co-Design	3	--	--	3
	18EC4213	Testing & Testability				
	18EC4112	Micro Electromechanical Systems				
<b>Program Elective IV</b>						
4	18EC4201	VLSI Technology	3	--	--	3
	18EC4202	Digital IC Design				
	18EC4008	Wireless Sensor Networks				
5	18EC4113	Internet of Things Lab	--	--	4	2
6	18EC4114	Microcontrollers & Interfacing Lab	--	--	4	2
7	18EC4115	Mini Project	--	--	4	2
<b>Audit Course - II</b>						
8	18HS0829	Constitution of India	2	-	-	-
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development Through Life Enlightenment Skills.				
Contact periods / Week			14	-	12	18
			Total/Week:26			

### II M. Tech -I Sem

S.No	Course Code	Course Name	L	T	P	Credits				
<b>Program Elective V</b>										
1	18EC4002	Advanced Digital Signal Processing								
	18EC4116	Radio Frequency Identification	3	--	--	3				
	18EC4117	System on Chip Architecture								
<b>Open Elective</b>										
2	18HS0824	Business Analytics								
	18ME3121	Industrial Safety								
	18ME3122	Advanced Operations Research	3	-	-	3				
	18CE1028	Cost Management of Engineering Projects								
	18ME3123	Composite Materials								
	18EE2128	Waste to Energy								
3	18EC4118	Dissertation-I					-	-	20	10
Contact periods / Week							6	-	20	16
			Total/Week:26							

### II M. Tech -II Sem

S.No	Course Code	Course Name	L	T	P	Credits
1	18EC4119	Dissertation -II	-	-	32	16
Contact periods / Week			Total/Week:32			16

## List of Subjects

<b>S. No</b>	<b>Course Code</b>	<b>Course Title</b>
1.	18EC4101	Embedded System Design
2.	18EC4102	Sensors and Actuators
3.	18EC4103	Structural Digital System Design
4.	18EC4209	FPGA Architectures & Applications
5.	18EC4104	Real Time Operating Systems
6.	18EC4105	Embedded Networking
7.	18EC4011	Wireless Communications
8.	18EC4106	Internet Protocols
9.	18EC4107	Embedded System Design Lab
10.	18EC4108	Structural Digital System Design Lab
11.	18HS0823	Research Methodology and IPR
12.	18HS0818	English for Research Paper Writing
13.	18HS0818	English for Research Paper Writing
14.	18CE1029	Disaster Management
15.	18HS0825	Sanskrit for Technical Knowledge
16.	18HS0826	Value Education
17.	18EC4109	Introduction to IoT
18.	18EC4110	Advanced Microcontrollers
19.	18EC4111	Hardware Software Co-Design
20.	18EC4213	Testing & Testability
21.	18EC4112	Micro Electromechanical Systems
22.	18EC4201	VLSI Technology
23.	18EC4202	Digital IC Design
24.	18EC4008	Wireless Sensor Networks
25.	18EC4113	Internet of Things Lab
26.	18EC4114	Microcontrollers & Interfacing Lab
27.	18EC4115	Mini Project
28.	18HS0829	Constitution of India
29.	18HS0827	Pedagogy Studies
30.	18HS0828	Stress Management by Yoga
31.	18HS0819	Personality Development Through Life Enlightenment Skills.
32.	18EC4002	Advanced Digital Signal Processing
33.	18EC4116	Radio Frequency Identification
34.	18EC4117	System on Chip Architecture
35.	18HS0824	Business Analytics
36.	18ME3121	Industrial Safety
37.	18ME3122	Advanced Operations Research
38.	18CE1028	Cost Management of Engineering Projects
39.	18ME3123	Composite Materials
40.	18EE2128	Waste to Energy
41.	18EC4118	Dissertation-I
42.	18EC4119	Dissertation -II



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
M.Tech EMBEDDED SYSTEMS (ES)  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course Code	Subject	L	T	P	CP
1.	16EC5501	Micro Controllers & Interfacing	4	-	-	4
2.	16EC5502	Embedded System Concepts	4	-	-	4
3.	16EC5503	Advanced Computer Architecture	4	-	-	4
4.	16EC5504	Advanced DSP & Applications	4	-	-	4
5.	16EC3801	Digital System Design	4	-	-	4
<b>ELECTIVE- I</b>						
6.	16EC5703	Digital IC Design				
7.	16EC5701	VLSI Technology	4	-	-	4
8.	16EC5710	Algorithms for VLSI Design Automation				
<b>LABORATORY</b>						
9.	16EC5505	Microcontrollers & Interfacing Lab	-	-	4	2
Contact periods / Week			24	-	4	<b>26</b>
			Total/Week <b>28</b>			

**I Year – II Semester**

S.No.	Course Code	Subject	L	T	P	CP
1.	16EC5506	Real Time Operating Systems	4	-	-	4
2.	16EC5507	Testing & Testability	4	-	-	4
3.	16EC5508	Hardware Software Co-Design	4	-	-	4
4.	16EC5509	Cryptography & Network Security	4	-	-	4
5.	16EC5708	FPGA Architecture and Applications	4	-	-	4
<b>ELECTIVE II</b>						
6.	16EC5510	Radio Frequency Identification				
7.	16EC5511	Micro Electromechanical Systems	4	-	-	4
8.	16EC5705	System Modeling & Simulation				
<b>LABORATORY</b>						
9.	16EC5512	RTOS and FPGA Lab	-	-	4	2
Contact Periods / Week			24	-	4	<b>26</b>
			Total/Week <b>28</b>			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16EC5513	Seminar	2
2	16EC5514	Project work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:PUTTUR**  
**(AUTONOMOUS)**  
**M. Tech. (Electronics & Communication Engineering)**  
**Specialization: VLSI**

**I M.Tech. - I Sem**

S. No	Course Code	Course Name	L	T	P	Credits
1	20HS0823	Research Methodology and IPR	2	-	-	2
2	20EC4201	VLSI Technology	3	-	-	3
3	20EC4202	Digital IC Design	3	-	-	3
<b>Programme Elective - I</b>						
4	20EC4203	ASIC Design	3	-	-	3
	20EC4204	System Modeling & Simulation				
	20EC4101	Embedded System Design				
<b>Programme Elective - II</b>						
5	20EC4205	Verilog HDL	3	-	-	3
	20EC4206	Analog IC Design				
	20EC4015	Image & Video Processing				
6	20EC4207	Digital Electronic Circuits Lab (Virtual Lab)	-	-	4	2
7	20EC4208	Digital IC Design Lab	-	-	4	2
<b>Audit Course - I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/ Week</b>			16	-	8	<b>18</b>
			Total/ Week:24			

## I M.Tech. - II Sem

S. No	Course Code	Course Name	L	T	P	Credits
1	20EC4209	FPGA Architectures & Applications	3	-	-	3
2	20EC4210	Low Power VLSI Design	3	-	-	3
<b>Programme Elective - III</b>						
3	20EC4211	Nano Electronics	3	-	-	3
	20EC4212	Algorithms for VLSI Design Automation				
	20EC4001	Advanced Digital System Design				
<b>Programme Elective - IV</b>						
4	20EC4213	Testing & Testability	3	-	-	3
	20EC4104	Real Time Operating System				
	20EC4214	Solid State Device Modeling and Simulation				
5	20EC4215	Mixed Signal Lab	-	-	4	2
6	20EC4216	Digital VLSI Design Lab (Virtual Lab)	-	-	4	2
7	20EC4217	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	20HS0829	Constitution of India	2	-	-	-
<b>Contact Periods/ Week</b>			14	-	12	<b>18</b>
			Total/ Week:26			

## II M.Tech.– I Sem

S. No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	20EC4218	Scripting Language for VLSI Design Automation	3	-	-	3
	20EC4219	Nano Materials and Nanotechnology				
	20EC4008	Wireless Sensor Networks				
<b>Open Elective</b>						
2	20HS0824	Business Analytics	3	-	-	3
	20CE1028	Cost Management of Engineering Projects				
	20EE2128	Waste to Energy				
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20ME3028	Composite Materials				
3	20EC4220	Dissertation Phase- I	-	-	20	10
<b>Contact Periods/ Week</b>			6	-	20	<b>16</b>
			Total/ Week:26			

## II M.Tech. - II Sem.

S. No	Course Code	Course Name	L	T	P	Credits
1	20EC4221	Dissertation Phase- II	-	-	32	16
			Total/ Week:32			

**NOTE:** L- Lecture, T- Theory, P-Practical



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
(AUTONOMOUS)

**M. Tech. (Electronics & Communication Engineering)**

**Specialization: VLSI**

**I M.Tech - I Sem**

S. No	Course Code	Course Name	L	T	P	Credits
1	19HS0823	Research Methodology and IPR	2	-	-	2
2	19EC4201	VLSI Technology	3	-	-	3
3	19EC4202	Digital IC Design	3	-	-	3
<b>Programme Elective - I</b>						
4	19EC4203	ASIC Design	3	-	-	3
	19EC4204	System Modeling & Simulation				
	19EC4101	Embedded System Design				
<b>Programme Elective - II</b>						
5	19EC4205	Verilog HDL	3	-	-	3
	19EC4206	Analog IC Design				
	19EC4015	Image & Video Processing				
6	19EC4207	Digital Electronic Circuits Lab (Virtual Lab)	-	-	4	2
7	19EC4208	Digital IC Design Lab	-	-	4	2
<b>Audit Course - I</b>						
8	19HS0818	English for Research Paper Writing	2	-	-	-
<b>Contact Periods/ Week</b>			16	-	8	<b>18</b>
			Total/ Week:24			



## I M.Tech - II Sem

S. No	Course Code	Course Name	L	T	P	Credits
1	19EC4209	FPGA Architectures & Applications	3	-	-	3
2	19EC4210	Low Power VLSI Design	3	-	-	3
<b>Programme Elective - III</b>						
3	19EC4211	Nano Electronics	3	-	-	3
	19EC4212	Algorithms for VLSI Design Automation				
	19EC4001	Advanced Digital System Design				
<b>Programme Elective - IV</b>						
4	19EC4213	Testing & Testability	3	-	-	3
	19EC4104	Real Time Operating System				
	19EC4214	Solid State Device Modeling and Simulation				
5	19EC4215	Mixed Signal Lab	-	-	4	2
6	19EC4216	Digital VLSI Design Lab (Virtual Lab)	-	-	4	2
7	19EC4217	Mini Project	-	-	4	2
<b>Audit Course - II</b>						
8	19HS0829	Constitution of India	2	-	-	-
<b>Contact Periods/ Week</b>			14	-	12	<b>18</b>
			Total/ Week:26			

## II M.Tech – ISem

S. No	Course Code	Course Name	L	T	P	Credits
<b>Programme Elective - V</b>						
1	19EC4218	Scripting Language for VLSI Design Automation	3	-	-	3
	19EC4219	Nano Materials and Nanotechnology				
	19EC4008	Wireless Sensor Networks				
<b>Open Elective</b>						
2	19HS0824	Business Analytics	3	-	-	3
	19CE1028	Cost Management of Engineering Projects				
	19EE2128	Waste to Energy				
	19ME3121	Industrial Safety				
	19ME3021	Advances in Operations Research				
	19ME3022	Composite Materials				
3	19EC4220	Dissertation Phase- I	-	-	20	10
<b>Contact Periods/ Week</b>			6	-	20	<b>16</b>
			Total/ Week:26			

## II M.Tech - II Sem

S. No	Course Code	Course Name	L	T	P	Credits
1	19EC4221	DissertationPhase- II	-	-	32	16
			Total/ Week:32			

**NOTE:** L- Lecture, T- Theory, P-Practical

**M. Tech. (Electronics & Communication Engineering)**  
**Specialization: VLSI**

**I M.Tech -I Sem**

S. No	Course Code	Course Name	L	T	P	Credits
1	18EC4201	VLSI Technology	3	0	-	3
2	18EC4202	Digital IC Design	3	0	-	3
<b>Program Elective -I</b>						
3	18EC4203	ASIC Design				
	18EC4204	System Modeling & Simulation	3	0	-	3
	18EC4101	Embedded System Design				
<b>Program Elective -II</b>						
4	18EC4205	Verilog HDL				
	18EC4206	Analog IC Design	3	0	-	3
	18EC4015	Image & Video Processing				
5	18EC4207	Digital Electronic Circuits Lab (Virtual Lab)	-	-	4	2
6	18EC4208	Digital IC Design Lab	-	-	4	2
7	18HS0823	Research Methodology and IPR	2	0	-	2
<b>Audit Course-I</b>						
8	18HS0818	English for Research Paper Writing				
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge	2	0	-	0
	18HS0826	Value Education				
<b>Contact Periods/ Week</b>			16	-	8	<b>18</b>
			Total/ Week:24			

**I M.Tech -II Sem**

S. No	Course Code	Course Name	L	T	P	Credits
1	18EC4209	FPGA Architectures & Applications	3	0	-	3
2	18EC4210	Low Power VLSI Design	3	0	-	3
<b>Program Elective -III</b>						
3	18EC4211	Nano Electronics				
	18EC4212	Algorithms for VLSI Design Automation	3	0	-	3
	18EC4001	Advanced Digital System Design				
<b>Program Elective -IV</b>						
4	18EC4213	Testing & Testability				
	18EC4104	Real Time Operating System	3	0	-	3
	18EC4214	Solid State Device Modeling and Simulation				
5	18EC4215	Mixed Signal Lab	-	-	4	2
6	18EC4216	Digital VLSI Design Lab (Virtual Lab)	-	-	4	2
7	18EC4217	Mini Project	-	-	4	2

Audit Course -II						
8	18HS0829	Constitution of India	2	0	-	0
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development Through Life Enlightenment Skills.				
<b>Contact Periods/ Week</b>			14	-	12	<b>18</b>
			Total/ Week:26			

### II M.Tech -I Sem

S. No	Course Code	Course Name	L	T	P	Credits
<b>Program Elective V</b>						
1	18EC4218	Scripting Language for VLSI Design Automation	3	0	-	3
	18EC4219	Nano Materials and Nanotechnology				
	18EC4008	Wireless Sensor Networks				
<b>Open Elective</b>						
2	18HS0824	Business Analytics	3	0	-	3
	18ME3121	Industrial Safety				
	18ME3122	Advanced Operations Research				
	18CE1028	Cost Management of Engineering Projects				
	18ME3123	Composite Materials				
	18EE2128	Waste to Energy				
3	18EC4220	Dissertation Phase I	--	--	20	10
<b>Contact Periods/ Week</b>			6	-	20	<b>16</b>
			Total/ Week:26			

### II M.Tech -II Sem

S. No	Course Code	Course Name	L	T	P	Credits
1	18EC4221	Dissertation Phase II	--	--	32	16
			Total/ Week:32			

### List of Subjects

S No.	Subject Code	Subject Name
1.	18EC4201	VLSI Technology
2.	18EC4202	Digital IC Design
3.	18EC4203	ASIC Design
4.	18EC4204	System Modeling & Simulation
5.	18EC4101	Embedded System Design
6.	18EC4205	Verilog HDL
7.	18EC4206	Analog IC Design
8.	18EC4015	Image & Video Processing
9.	18EC4207	Digital Electronic Circuits Lab (Virtual Lab)
10.	18EC4208	Digital IC Design Lab
11.	18HS0823	Research Methodology and IPR
12.	18HS0818	English for Research Paper Writing
13.	18CE1029	Disaster Management
14.	18HS0825	Sanskrit for Technical Knowledge
15.	18HS0826	Value Education
16.	18EC4209	FPGA Architectures & Applications
17.	18EC4210	Low Power VLSI Design
18.	18EC4211	Nano Electronics
19.	18EC4212	Algorithms for VLSI Design Automation
20.	18EC4001	Advanced Digital System Design
21.	18EC4213	Testing & Testability
22.	18EC4104	Real Time Operating Systems
23.	18EC4214	Solid State Device Modeling and Simulation
24.	18EC4215	Mixed Signal Lab
25.	18EC4216	Digital VLSI Design Lab (Virtual Lab)
26.	18EC4217	Mini Project
27.	18HS0829	Constitution of India
28.	18HS0827	Pedagogy Studies
29.	18HS0828	Stress Management by Yoga
30.	18HS0819	Personality Development Through Life Enlightenment Skills.
31.	18EC4218	Scripting Language for VLSI Design Automation
32.	18EC4219	Nano Materials and Nanotechnology
33.	18EC4008	Wireless Sensor Networks
34.	18HS0824	Business Analytics
35.	18ME3121	Industrial Safety
36.	18ME3122	Advanced Operations Research
37.	18CE1028	Cost Management of Engineering Projects
38.	18ME3123	Composite Materials
39.	18EE2128	Waste to Energy
40.	18EC4220	Dissertation Phase I
41.	18EC4221	Dissertation Phase II



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
**M.Tech (VLSI)**  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EC5701	VLSI Technology	4	0	-	4
2.	16EC5702	Analog IC Design	4	0	-	4
3.	16EC5703	Digital IC Design	4	0	-	4
4.	16EC5704	Verilog HDL	4	0	-	4
5.	16EC5508	Hardware Software Co-Design	4	0	-	4
<b>ELECTIVE-I</b>						
6.	16EC5502	Embedded system Concepts				
7.	16EC5705	System Modeling & Simulation	4	0	-	4
8.	16EC5706	ASIC Design				
<b>LABORATORY</b>						
9.	16EC5707	Digital IC Design Lab	-	-	4	2
			24	0	4	26
Contact periods / week			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16EC5708	FPGA Architectures & Applications	4	0	-	4
2.	16EC5507	Testing & Testability	4	0	-	4
3.	16EC5709	Low Power VLSI Design	4	0	-	4
4.	16EC5710	Algorithms for VLSI Design Automation	4	0	-	4
5.	16EC5711	Scripting Language for VLSI Design Automation	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16EC5712	Nano Electronics				
7.	16EC5509	Cryptography & Network Security	4	0	-	4
8.	16EC5506	Real Time Operating Systems				
<b>LABORATORY 1</b>						
9.	16EC5713	Mixed Signal Lab	-	-	4	2
			24	0	4	26
Contact Periods / Week			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16EC5714	Seminar	2
2	16EC5715	Project work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Specialization: Computer Science and Engineering**

**I M. Tech. – I Semester**

S.No.	Course Code	Subject	L	T	P/Drg	C
1	20CS5001	Advanced Data Structures	3	-	-	3
2	20CS5002	Python Programming	3	-	-	3
<b>Program Elective – I</b>						
3	20CS0512	Software Engineering and Testing	3	-	-	3
	20CS5013	Wireless Sensor Networks				
	20CS5014	Introduction to Intelligent Systems				
<b>Program Elective - II</b>						
4	20CS5015	Data Science	3	-	-	3
	20CS5016	Distributed Systems				
	20CS5017	Advanced Wireless and Mobile Networks				
5	20HS0823	Research Methodology and IPR	2	-	-	2
6	20CS5003	Advanced Data Structures Lab	-	-	4	2
7	20CS5004	Python Programming Lab	-	-	4	2
<b>Audit Course – I</b>						
8	20HS0818	English for Research Paper Writing	2	-	-	-
Contact Periods / Week			16	-	08	<b>18</b>
			Total/Week 24			

**I M. Tech. – II Semester**

S.No.	Course Code	Subject	L	T	P	C
1.	20CS5005	Machine Learning	3	-	-	3
2.	20CS5006	Soft Computing	3	-	-	3
<b>Program Elective – III</b>						
3.	20CS5018	Grid and Cloud Computing	3	-	-	3
	20CS5019	Cyber Security				
	20CS5020	Computer Vision				
<b>Program Elective – IV</b>						
4	20CS5021	Human Computer Interaction	3	-	-	3
	20CS5022	GPU Computing				
	20CS5023	Digital Forensics				
5.	20CS5007	Machine Learning Lab	-	-	4	2
6.	20CS5008	Soft Computing Lab	-	-	4	2
7.	20CS5009	Mini Project	2	-	-	2
<b>Audit Course - II</b>						
8.	20HS0829	Constitution of India	2	-	-	-
Contact Periods / Week			16	-	08	<b>18</b>
			Total/Week 24			

**II M. Tech. – I Semester (CSE)**

S. No.	Course Code	Subject	L	T	P	C
<b>Program Elective-V</b>						
1	20CS5024	Big Data Analytics				
	20CS5025	Distributed Databases	3	0	0	3
	20CS5026	Advanced Operating Systems				
<b>Open Elective</b>						
2	20HS0824	Business Analytics				
	20ME3026	Industrial Safety				
	20ME3027	Advances in Operations Research				
	20CE1028	Cost Management of Engineering Projects	3	0	0	3
	20ME3028	Composite Materials				
	20EE2128	Waste to Energy				
3	20CS5010	Project Phase-I /Dissertation-I /Industrial Project	0	0	20	10
Contact Periods / Week			06	00	20	<b>16</b>
			Total/Week 26			

**II M. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1.	20CS5011	Project Phase –II/ Dissertation-II	0	0	32	16
Contact Periods / Week			0	0	32	<b>16</b>
			Total/Week 32			

**Total Number of Credits= 18 +18+16+16 = 68**





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR  
(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Specialization: Computer Science and Engineering**

**I M. Tech. – I Semester**

S.No	Course Code	Subject	L	T	P/Drg	C
1.	19HS0823	Research Methodology and IPR	2	-	-	2
2.	19HS0841	Discrete Mathematics and Applications	3	-	-	3
3.	19CS5001	Advanced Data Structures	3	-	-	3
<b>Programme Elective - I</b>						
4.	19CS5010	Machine Learning		-	-	
5.	19CS5011	Wireless Sensor Networks	3	-	-	3
6.	19CS5012	Introduction to Intelligent Systems		-	-	
<b>Programme Elective - II</b>						
7.	19CS5013	Data Science		-	-	
8.	19CS5014	Distributed Systems	3	-	-	3
9.	19CS5015	Advanced Wireless and Mobile Networks		-	-	
10.	19CS5002	Advanced Data Structures Lab	-	-	4	2
11.	19CS5016	Machine Learning Lab	-	-	4	2
12.		<b>Audit Course – I</b>				
13.	19HS0818	English for Research Paper Writing	2	-	-	0
Contact Periods / Week			16	-	08	18
					Total/Week 24	

**I M. Tech. – II Semester**

1.	19CS5003	Advanced Algorithms	3	-	-	3
2.	19CS5004	Soft Computing	3	-	-	3
<b>Programme Elective – III</b>						
3.	19CS5017	Data Preparation and Analysis		-	-	
4.	19CS5018	Secure Software Design & Enterprise Computing	3	-	-	3
5.	19CS5019	Computer Vision		-	-	
<b>Programme Elective – IV</b>						
6.	19CS5020	Human and Computer Interaction		-	-	
7.	19CS5021	GPU Computing	3	-	-	3
8.	19CS5022	Digital Forensics		-	-	
9.	19CS5005	Advanced Algorithms Lab	-	-	4	2
10.	19CS5006	Soft Computing Lab	-	-	4	2
11.	19CS5007	Mini Project	2			2
<b>Audit Course – II</b>						
12.	19HS0829	Constitution of India	2	-	-	-
Contact Periods / Week			16	-	08	18
					Total/Week 24	

**II M. Tech. – I Semester (CSE)**

S.No	Course Code	Subject	L	T	P/Drg	C
<b>Program Elective-V</b>						
1	19CS5023	Big Data Analytics		-	-	3
	19CS5024	Distributed Databases	3	-	-	
	19CS5025	Advanced Operating Systems		-	-	
<b>Open Elective</b>						
2	19HS0824	Business Analytics		-	-	3
	19ME3121	Industrial Safety		-	-	
	19ME3021	Advances in Operations Research	3			
	19CE1028	Cost Management of Engineering Projects				
	19ME3022	Composite Materials				
	19EE2128	Waste to Energy		-	-	
3	19CS5008	Phase-I Dissertation-I /Industrial Project	0	0	20	10
Contact Periods / Week			06	-	20	16
			Total/Week 26			

**II M. Tech. – II Semester**

1.	19CS5009	Phase –II Dissertation II	0	0	32	16
Contact Periods / Week				0	32	
				Total/Week 24		

**Total Number of Credits= 18 +18+16+16 = 68**

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR**  
**(AUTONOMOUS)**  
**Master of Technology**  
**Department of Computer Science & Engineering**  
**I M. Tech. – I Semester (CSE)**

S.No.	Course Code	Subject	L	T	P/Drg	C
1	18HS0841	Mathematical Foundations of Computer Science	3	0	0	3
2	18CS5001	Advanced Data Structures	3	0	0	3
3	18CS5010	<b>Program Elective I</b> Machine Learning	3	0	0	3
	18CS5011	Wireless Sensor Networks				
	18CS5012	Introduction to Intelligent Systems				
4	18CS5013	<b>Program Elective II</b> Data Science	3	0	0	3
	18CS5014	Distributed Systems				
	18CS5015	Advanced Wireless and Mobile Networks				
5	18HS0823	Research Methodology and IPR	2	0	0	2
6	18CS5002	Advanced Data Structures Lab	-	-	4	2
7	18CS5016	Machine Learning Lab	-	-	4	2
8	18HS0818	<b>Audit I</b> English for Research Paper Writing	3	0	0	0
	18CE1029	Disaster Management				
	18HS0825	Sanskrit for Technical Knowledge				
	18HS0826	Value Education				
Contact Periods / Week			16	00	08	<b>18</b>
			Total/Week 24			

**I M. Tech. – II Semester (CSE)**

S.No.	Course Code	Subject	L	T	P	C
1.	18CS5003	Advance Algorithms	3		0	3
2.	18CS5004	Soft Computing	3		0	3
3.	18CS5017	<b>Program Elective III</b> Data Preparation and Analysis	3		0	3
	18CS5018	Secure Software Design & Enterprise Computing				
	18CS5019	Computer Vision				
4.	18CS5020	<b>Program Elective IV</b> Human and Computer Interaction	3		0	3
	18CS5021	GPU Computing				
	18CS5022	Digital Forensics				
5.	18CS5005	Advance Algorithms Lab	-	-	4	2
7.	18CS5006	Soft Computing Lab	-	-	4	2
7.	18CS5007	Mini Project with Seminar	2	-	0	2
8.	18HS0829	<b>Audit II</b> Constitution of India	3	0	0	0
	18HS0827	Pedagogy Studies				
	18HS0828	Stress Management by Yoga				
	18HS0819	Personality Development through Life Enlightenment Skills.				
Contact Periods / Week			14	00	08	<b>18</b>
			Total/Week 22			

## II M. Tech. – I Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1.	18CS5023 18CS5024 18CS5025	<b>Program Elective V</b> Mobile Applications and Services Compiler for HPC Optimization Techniques	3	0	0	3
2.	18HS0824 18ME3121 18ME3122 18CE1028  18ME3128 18EE2128	<b>Open Elective</b> 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering <b>Projects</b> 5. Composite Materials 6. Waste to Energy	3	0	0	3
3.	18CS5008	Phase-I Dissertation-I /Industrial Project	0	0	20	10
Contact Periods / Week			06	00	20	<b>16</b>
			Total/Week 26			

## II M. Tech. – II Semester (CSE)

S.No.	Course Code	Subject	L	T	P	C
1.	18CS5009	Phase –II Dissertation II	0	0	32	16
Contact Periods / Week			0	0	32	
			Total/Week 32			



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**  
**M.Tech (CSE)**  
**COURSE STRUCTURE**

**I Year – I Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16CS5801	Object Oriented Software Engineering	4	0	-	4
2.	16CS5802	Advanced Computer Networks	4	0	-	4
3.	16CS5803	Programming in Python	4	0	-	4
4.	16CS5804	Advanced Data structures and Algorithms	4	0	-	4
5.	16CS5805	Cyber Crime Investigations and Digital Forensics	4	0	-	4
<b>ELECTIVE-I</b>						
6.	16CS5806	Advances in Databases				
7.	16CS5807	Advanced Operating Systems	4	0	-	4
8.	16CS5808	Computer Vision				
<b>LABORATORY</b>						
9.	16CS5809	Software Lab- 1 (Covering the experiments: PYTHON Tasks, Data structure tasks)	-	-	4	2
			24	0	4	26
Contact periods / week			Total/Week 28			

**I Year – II Semester**

S.No.	Course code	Subject	L	T	P	CP
1.	16CS5810	Software Architecture and Design Patterns	4	0	-	4
2.	16CS5811	Cloud Computing	4	0	-	4
3.	16CS5812	Data Analytics	4	0	-	4
4.	16CS5813	Java & Web Technologies	4	0	-	4
5.	16CS5814	Object Oriented Analysis and Design	4	0	-	4
<b>ELECTIVE- II</b>						
6.	16CS5815	Machine Learning				
7.	16CS5816	Distributed Systems	4	0	-	4
8.	16CS5817	Image Processing and Pattern Recognition				
<b>LABORATORY 1</b>						
9.	16CS5818	Software Lab- 2 (Covering the experiments: JWT Tasks & UML Tasks)	-	-	4	2
			24	0	4	26
Contact Periods / Week			Total/Week 28			

**II YEAR (III & IV Semesters)**

S. No	Subject Code	Subject	Credits
1	16CS5819	Seminar	2
2	16CS5820	Project Work	16



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)  
Department of Management Studies**

**I MBA – I Semester**

Sl. No.	Course Code	Course Title	L	T	P	C
1.	20MB9001	Management & Organizational Behavior	4	-	-	4
2.	20MB9002	Accounting for Managers	4	-	-	4
3.	20MB9003	Business and Cyber Laws	4	-	-	4
4.	20MB9004	Business Statistics for Managers	4	-	-	4
5.	20MB9005	Managerial Economics	4	-	-	4
6.	20MB9006	Management Information System	3	-	-	3
7.	20MB9007	Business Communications	2	-	-	2
8.	20HS0858	Communicative English Lab for Managers	-	-	2	1
		<b>Total</b>	<b>25</b>	<b>-</b>	<b>2</b>	<b>26</b>

**IMBA – II Semester**

Sl. No.	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	20MB9008	Human Resources Management	4	-	-	4
2.	20MB9009	Financial Management	4	-	-	4
3.	20MB9010	Marketing Management	4	-	-	4
4.	20MB9011	Business Research Methods	4	-	-	4
5.	20MB9012	Operations Management	3	-	-	3
6.	20MB9013	Operations Research	4	-	-	4
7.	20MB9014	Advanced Studies on Indian Economy & Policy	2	-	-	2
8.	20MC9146	Computer and Information System Lab	-	-	2	1
<b>Audit Course</b>						
	20HS0822	Human Values and Professional Ethics for Managers	2	-	-	-
		<b>Total</b>	<b>27</b>	<b>-</b>	<b>2</b>	<b>26</b>

## IIMBA – I Semester

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	20MB9015	Business Ethics and Corporate Governance	4	-	-	4
2.	20MB9016	<b>Open Electives – I</b> Entrepreneurship Development	4	-	-	4
	20MB9017	Spiritual Management				
	20MB9018	Basics of Business Process Outsourcing				
	20MB9019	Agri-Business Management				
	20MB9020	Export and Import Management				
3.	<b>Elective Courses – I</b>					
	20MB9021	Investment Analysis and Portfolio Management				
	20MB9022	Sales and Distribution Management	4	-	-	4
	20MB9023	Performance Management Systems				
	20MB9024	Enterprise Resource Planning				
4.	<b>Elective Courses – II</b>					
	20MB9025	Risk Management and Insurance				
	20MB9026	Advertising and sales Promotion Management	4	-	-	4
	20MB9027	Knowledge Management				
	20MB9028	Data warehousing and Mining				
5.	<b>Elective Courses – III</b>					
	20MB9029	Financial Markets and Services				
	20MB9030	Consumer Behavior	4	-	-	4
	20MB9031	Training and Development				
	20MB9032	Supply Chain Management				
6.	<b>Elective Courses – IV</b>					
	20MB9033	Cost and Management Accounting				
	20MB9034	Product and Brand Management	4	-	-	4
	20MB9035	Human Resource Planning				
	20MB9036	E- Business				
7.	20MB9037	Industry Analysis & Report Presentation	-	-	2	1
8.	20MB9038	Business Simulation Lab	-	-	2	1
		<b>Total</b>	<b>24</b>	<b>-</b>	<b>4</b>	<b>26</b>

## II MBA – II Semester

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	20MB9039	Strategic Management	4	-	-	4
2.	20MB9040	<b>Open Electives – II</b> Green Business Management	4		-	4
	20MB9041	World Trade Organization & Intellectual Property Rights				
	20MB9042	Cross Culture Management				
	20MB9043	Innovation Technology Management				
	20MB9044	Organizational Culture & Teamwork				
3.	<b>Elective Courses– V</b>					
	20MB9045	Financial Derivatives	4	-	-	4
	20MB9046	Services Marketing				
	20MB9047	Organizational Change and Development				
	20MB9048	Data Communication and Network Analysis				
4.	<b>Elective Courses – VI</b>					
	20MB9049	International Financial Management	4	-	-	4
	20MB9050	International Marketing				
	20MB9051	International Human Resource Management				
	20MB9052	Corporate Information Management				
5.	20MB9053	Seminar on Contemporary Issues of Management	-	-	4	2
6.	20MB9054	Project Work & Viva voce	-	-	12	6
		<b>Total</b>	<b>16</b>	<b>-</b>	<b>16</b>	<b>24</b>





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**Department of Management Studies**

**I MBA – I Semester**

Sl. No.	Course Code	Course Title	L	T	P	C
1.	19MB9001	Management & Organizational Behavior	4	-	-	4
2.	19MB9002	Accounting for Managers	4	-	-	4
3.	19MB9003	Business Law and Regulations	4	-	-	4
4.	19MB9004	Business Statistics for Managers	4	-	-	4
5.	19MB9005	Managerial Economics	4	-	-	4
6.	19MB9006	Management Information System	3	-	-	3
7.	19MB9007	Business Communications	2	-	-	2
8.	19HS0811	Communicative English Lab	-	-	2	1
		<b>Total</b>	<b>25</b>	<b>-</b>	<b>2</b>	<b>26</b>

**IMBA – II Semester**

Sl. No.	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	19MB9008	Human Resources Management	4	-	-	4
2.	19MB9009	Financial Management	4	-	-	4
3.	19MB9010	Marketing Management	4	-	-	4
4.	19MB9011	Business Research Methods	4	-	-	4
5.	19MB9012	Operations Management	3	-	-	3
6.	19MB9013	Operations Research	4	-	-	4
7.	19MB9014	Advanced Studies on Indian Economy & Policy	2	-	-	2
8.	19MC9151	Fundamentals of Computer and Information System Lab	-	-	2	1
<b>Audit Course</b>						
	19HS0822	Human Values and Professional Ethics for Managers	2	-	-	-
		<b>Total</b>	<b>27</b>	<b>-</b>	<b>2</b>	<b>26</b>

## IIMBA – I Semester

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	19MB9015	Business Ethics and Corporate Governance	4	-	-	4
2.	19MB9016 19MB9017 19MB9018 19MB9019 19MB9020	<b>Open Electives – I</b> Entrepreneurship Development Spiritual Management Basics of Business Process Outsourcing Agri-Business Management Export and Import Management	4	-	-	4
3.	<b>Elective Courses – I</b>					
	19MB9021	Investment Analysis and Portfolio Management				
	19MB9022	Sales and Distribution Management	4	-	-	4
	19MB9023	Performance Management Systems				
	19MB9024	Enterprise Resource Planning				
4.	<b>Elective Courses – II</b>					
	19MB9025	Risk Management and Insurance				
	19MB9026	Advertising and sales Promotion Management	4	-	-	4
	19MB9027	Knowledge Management				
	19MB9028	Data warehousing and Mining				
5.	<b>Elective Courses – III</b>					
	19MB9029	Financial Markets and Services				
	19MB9030	Consumer Behavior	4	-	-	4
	19MB9031	Training and Development				
	19MB9032	Supply Chain Management				
6.	<b>Elective Courses – IV</b>					
	19MB9033	Cost and Management Accounting				
	19MB9034	Product and Brand Management	4	-	-	4
	19MB9035	Human Resource Planning				
	19MB9036	E- Business				
7.	19MB9037	Industry Analysis & Report Presentation	-	-	2	1
8.	19MB9038	Business Simulation Lab	-	-	2	1
		<b>Total</b>	<b>24</b>	<b>-</b>	<b>4</b>	<b>26</b>

## II MBA – II Semester

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	19MB9039	Strategic Management	4	-	-	4
2.		<b>Open Electives – II</b>				
	19MB9040	Green Business Management	4	-	-	4
	19MB9041	World Trade Organization & Intellectual Property Rights				
	19MB9042	Cross Culture Management				
	19MB9043	Innovation Technology Management				
19MB9044	Organizational Culture & Teamwork					
3.	<b>Elective Courses– V</b>					
	19MB9045	Financial Derivatives	4	-	-	4
	19MB9046	Services Marketing				
	19MB9047	Organizational Change and Development				
	19MB9048	Data Communication and Network Analysis				
4.	<b>Elective Courses – VI</b>					
	19MB9049	International Financial Management	4	-	-	4
	19MB9050	International Marketing				
	19MB9051	International Human Resource Management				
	19MB9052	Corporate Information Management				
5.	19MB9053	Seminar on Contemporary Issues of Management	-	-	4	2
6.	19MB9054	Project Work & Viva voce	-	-	12	6
		<b>Total</b>	<b>16</b>	<b>-</b>	<b>16</b>	<b>24</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY PUTTUR  
(AUTONOMOUS)  
MASTER OF BUSINESS ADMINISTRATION  
COURSE STRUCTURE (R-18) I- YEAR I SEM (2018-19)**

Sl. No.	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	18MB9001	Organizational Behavior	4	-	-	4
2.	18MB9002	Financial Accounting & Analysis	4	-	-	4
3.	18MB9003	Business Law and Regulations	4	-	-	4
4.	18MB9004	Business Statistics and Analytics for Decision Making	4	-	-	4
5.	18MB9005	Managerial Economics	4	-	-	4
6.	18MB9006	Entrepreneurship in Practice	4	-	-	4
7.	18MB9007	Business Communication Lab	-	-	2	1
8.	18MC9150	Fundamentals of Computer and Information System Lab	-	-	2	1
<b>Total</b>			<b>24</b>	<b>-</b>	<b>4</b>	<b>26</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY PUTTUR  
(AUTONOMOUS)  
MASTER OF BUSINESS ADMINISTRATION  
COURSE STRUCTURE (R-18) I- YEAR II SEM (2018-19)**

Sl. No.	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	18MB9008	Human Resources Management	4	-	-	4
2.	18MB9009	Financial Management	4	-	-	4
3.	18MB9010	Marketing Management	4	-	-	4
4.	18MB9011	Business Research Methods	4	-	-	4
5.	18MB9012	Operations Management	4	-	-	4
6.	18MB9013	Management Information System	3	-	-	3
7.	18MB9014	Case Study Analysis	-	-	3	1.5
8.	18HS0805	English Lab	-	-	3	1.5
<b>Audit Course</b>						
	18HS0815	Human Values and Professional Ethics for Managers	2	-	-	-
<b>Total</b>			<b>25</b>	<b>-</b>	<b>6</b>	<b>26</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY PUTTUR  
(AUTONOMOUS)  
MASTER OF BUSINESS ADMINISTRATION  
COURSE STRUCTURE (R-18) II- YEAR I SEM (2018-19)**

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	18MB9015	Business Ethics and Corporate Governance	4	-	-	4
2.	<b>Open Electives – 1</b>					
	18MB9016	Indian Economy & Policy				
	18MB9017	Spiritual Management				
	18MB9018	Basics of Business Process Outsourcing	4	-	-	4
	18MB9019 18MB9020	Agri-Business Management Export and Import Management				
3.	<b>Elective Courses – I</b>					
	18MB9021	Investment Analysis and Portfolio Management				
	18MB9022	Sales and Distribution Management	4	-	-	4
	18MB9023	Performance Management Systems				
	18MB9024	Enterprise Resource Planning				
4.	<b>Elective Courses – II</b>					
	18MB9025	Risk Management and Insurance				
	18MB9026	Advertising and sales Promotion Management	4	-	-	4
	18MB9027	Knowledge Management				
	18MB9028	Data warehousing and Mining				
5.	<b>Elective Courses – III</b>					
	18MB9029	Financial Markets and Services				
	18MB9030	Customer Relationship Management	4	-	-	4
	18MB9031	Training and Development				
	18MB9032	Supply Chain Management				
6.	<b>Elective Courses – IV</b>					
	18MB9033	Cost and Management Accounting				
	18MB9034	Product and Brand Management				
	18MB9035	Human Resource Metrics and Analytics	4	-	-	4
	18MB9036	E- Business				
7.	18MB9037	Industry Analysis and Report Presentation	-	-	2	1
8.	18MB9038	Business Simulation Lab	-	-	2	1
		<b>Total</b>	<b>24</b>	<b>-</b>	<b>4</b>	<b>26</b>

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY PUTTUR  
(AUTONOMOUS)  
MASTER OF BUSINESS ADMINISTRATION  
COURSE STRUCTURE (R-18) II- YEAR II SEM (2018-19)**

Sl. No	Course Code	Course Title	Scheme of Instruction			
			L	T	P	C
1.	18MB9039	Green Business Management	4	-	-	4
2.		<b>Open Electives – II</b>		-		
	18MB9040	Computer Application for Business				
	18MB9041	World Trade Organization & Intellectual Property Rights	4		-	4
	18MB9042	Cross Culture Management				
	18MB9043	Innovation Technology Management				
	18MB9044	Sustaining Organizational Culture & Teamwork				
3.	<b>Elective Courses– V</b>					
	18MB9045	Financial Derivatives				
	18MB9046	Services Marketing				
	18MB9047	Organizational Change and Development	4	-	-	4
	18MB9048	Data Communication and Network Analysis				
4.	<b>Elective Courses – VI</b>					
	18MB9049	International Financial Management				
	18MB9050	International Marketing	4	-	-	4
	18MB9051	International HRM				
	18MB9052	Corporate Information Management				
5.	18MB9053	Seminar on (Contemporary Issues of Management)	-	-	2	1
6.	18MB9054	Comprehensive Vivo-voce	-	-	2	1
7.	18MB9055	Project Work	-	-	12	6
		<b>Total</b>	<b>16</b>	<b>-</b>	<b>16</b>	<b>24</b>





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(AUTONOMOUS)  
DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION  
**COURSE STRUCTURE**

**I Year - I Semester**

Sl. No	Course Code	Name of the Course / Laboratory	L	P/S	C
1	16MB701	Management & Organizational Behaviour	4	-	4
2	16MB702	Financial Accounting and Analysis	4	-	4
3	16MB703	Business Environment	4	-	4
4	16MB704	Statistics for Management	4	-	4
5	16MB705	Managerial Economics	4	-	4
6	16HS610	Professional English	3	-	3
7	16MC849	Fundamentals of Computer & Information System	3	-	3
8	16HS607	English Language and Communication Skills Lab	-	4	2
9	16MC850	Fundamentals of Computer & Information System Lab	-	4	2
<b>Credit Course</b>					
10	COE-I	Comprehensive Online Examination-I	-	-	1
Contact Period/ Week			26	8	
Total :				34	31

**I Year - II Semester**

Sl. No	Course Code	Name of the Course / Laboratory	L	P/S	C
1	16MB706	Human Resources Management	4	-	4
2	16MB707	Financial Management	4	-	4
3	16MB708	Operations Research for Managers	4	-	4
4	16MB709	Marketing Management	4	-	4
5	16MB710	Business Research Methods	4	-	4
6	16MB711	Operations Management	4	-	4
<b>Open Elective-I</b>					
7	16MB712	Management Information System	4	-	4
	16MB713	World Trade Organization & Intellectual Property Rights			
	16MB714	Cross Culture Management			
8	16MB715	Business Communication Lab	-	4	2
9	16MB716	Industry Analysis Report	2	-	2
<b>Credit Course</b>					
10	COE-II	Comprehensive Online Examination-II	-	-	1
<b>Audit Course</b>					
11	16HS619	Human Values and Professional Ethics for Managers	2	-	-
Contact Period/ Week			32	4	
Total :				36	33

## II Year - I Semester

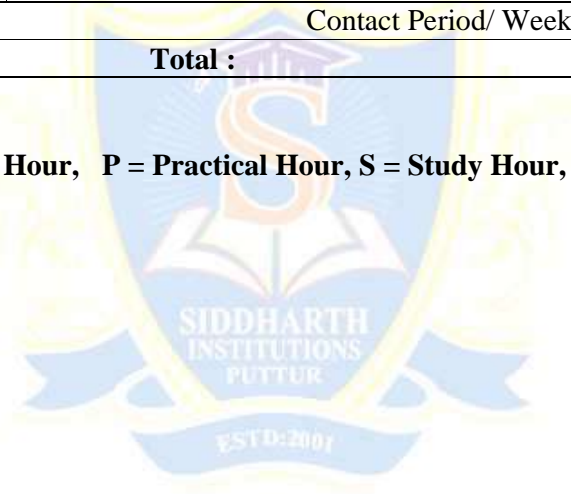
Sl. No	Course Code	Name of the Course / Laboratory	L	P/S	C
1	16MB717	Business Ethics And Corporate Governance	4	-	4
2	16MB718	Entrepreneurship Development	4	-	4
3	16MB719	Business Laws	4	-	4
4		<b>Departmental Elective – 1</b>			
	16MB720	Security Analysis and Portfolio Management	4	-	4
	16MB721	Sales and Distribution Management			
	16MB722	Performance Management			
16MB723	Enterprise Resource Planning				
5		<b>Departmental Elective – 2</b>			
	16MB724	Risk Management and Insurance	4	-	4
	16MB725	Advertising and sales Promotion Management			
	16MB726	Knowledge Management			
16MB727	Data warehousing and Mining				
6		<b>Departmental Elective – 3</b>			
	16MB728	Financial Institutions, Markets and Services	4	-	4
	16MB729	Customer Relationship Management			
	16MB730	Training and Development			
16MB731	Supply Chain Management				
7		<b>Departmental Elective – 4</b>			
	16MB732	Management Control System	4	-	4
	16MB733	Product and Brand Management			
	16MB734	Human Resource Planning			
16MB735	E- Business				
8	16MB736	Business Simulation Lab	-	4	2
<b>Credit Course</b>					
9	COE-III	Comprehensive Online Examination-III	-	-	1
<b>Audit Course</b>					
10	16HS616	Aptitude Practice-1	2	-	-
Contact Period/ Week			30	4	
<b>Total :</b>			34		31



## II Year - II Semester

Sl. No	Course Code	Name of the Course / Laboratory	L	P/S	C
1	16MB737	Strategic Management	4	-	4
2	16MB738	Environmental Business Management	4	-	4
3		<b>Departmental Elective – 5</b>			
	16MB739	Financial Derivatives			
	16MB740	Services Marketing	4	-	4
	16MB741	Organization Development			
	16MB742	Data Communication and Network Analysis			
4		<b>Departmental Elective – 6</b>			
	16MB743	International Financial Management			
	16MB744	International Marketing	4	-	4
	16MB745	Global Human Resource Management			
	16MB746	Corporate Information Management			
5	16MB747	Seminar(Contemporary Issues on Business)	-	4	2
6	16MB748	Project Work		12	6
<b>Credit Course</b>					
7	COE-IV	Comprehensive Online Examination-IV	-	-	1
Contact Period/ Week			16	16	
<b>Total :</b>			32		25

**L = Lecture Hour, P = Practical Hour, S = Study Hour, C = Credits**





**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR**

**(AUTONOMOUS)**

**Master of Computer Applications (MCA)**

**Course Structure**

**MCA I Year - I Semester**

S. No.	Course Code	Subject	L	T	P	C
1	20HS0836	Discrete Mathematics	4	-	-	4
2	20MC9101	Computer Organization	3	1	-	4
3	20MC9102	Data Structures	3	1	-	4
4	20MC9103	Operating System	3	1	-	4
5	20MC9104	Object Oriented Programming through C++	3	1	-	4
6	20MC9105	Data Structures using C Lab	-	-	3	1.5
7	20MC9106	Object Oriented Programming through C++ Lab	-	-	3	1.5
8	20MC9107	P.C. Software Lab	-	-	4	2
Contact periods/Week			16	4	10	25
			Total/Week 30			

**MCA I Year - II Semester**

S. No.	Course Code	Subject	L	T	P	C
1	20MC9108	Computer Networks	3	1	-	4
2	20MC9109	JAVA Programming	3	1	-	4
3	20MC9110	Computer Graphics	3	1	-	4
4	20MC9111	Database Management System	3	1	-	4
5	20MC9112	Software Engineering	3	1	-	4
6	20MC9113	JAVA Programming Lab	-	-	3	1.5
7	20MC9114	Computer Graphics Lab	-	-	3	1.5
8	20MC9115	Database Management System Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-I	Comprehensive Online Examination – I	-	-	-	1
<b>Audit Course – I</b>						
10	20HS0863	Professional Communication Skills Lab	-	-	2	-
Contact periods/Week			15	5	14	26
			Total/Week 34			

## MCA II Year -I- Semester

S. No.	Course Code	Subject	L	T	P	C
1	20MC9116	Web Technologies	3	1	-	4
2	20MC9117	Mobile Application Development	3	1	-	4
3	20MC9118	Data Warehousing and Data Mining	3	1	-	4
4	20MC9119	<b>Programme Elective – I</b> Software Testing	3	1	-	4
	20MC9120	Artificial Intelligence				
	20MC9121	Distributed Systems				
	20MC9122	Linux Programming				
	20MC9123	Network Security				
5	20MC9124	<b>Programme Elective – II</b> Human Computer Interaction	3	1	-	4
	20MC9125	Advanced Programming(Python & R-Languages)				
	20MC9126	Internet of Things				
	20MC9127	E-Commerce				
	20MC9128	Block Chain Technology				
6	20MC9129	Web Technologies Lab	-	-	4	2
7	20MC9130	Mobile Application Development Lab	-	-	4	2
8	20MC9131	Data Warehousing and Data Mining Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination – II	-	-	-	1
<b>Audit Course – II</b>						
10	20HS0842	Aptitude Practices	3	-	-	-
Contact periods/Week			18	5	12	27
			Total/Week 35			

## MCA II Year-II- Semester

S. No.	Course Code	Subject	L	T	P	C
1	20MC9132	Cloud Computing	3	1	-	4
2	20MC9133	<b>Programme Elective – III</b> Cyber Security	3	1	-	4
	20MC9134	Machine Learning				
	20MC9135	Software Project Management				
	20MC9136	.Net Technologies				
	20MC9137	Bio-informatics				
3	20MC9138	<b>Programme Elective – IV</b> Neural Networks & Fuzzy logic	3	1	-	4
	20MC9139	Image Processing				
	20MC9140	Design Patterns				
	20MC9141	Big Data Analytics				
	20MC9142	Enterprise Resource Planning				
4	20MC9143	Seminar	-	-	4	2
5	20MC9144	Dissertation	-	-	20	10
Contact periods/Week			09	3	24	24
			Total/Week 36			

Note: L: Lecture Hour, T: Tutorial, P: Practical, C: Credit

Total Credits: 102



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR**

(AUTONOMOUS)

**Master of Computer Applications (MCA)**

**Course Structure**

**MCA I Year - I Semester**

S. No.	Course Code	Subject	L	T	P	C
1	19HS0810	Communicative English	3	-	-	3
2	19HS0835	Probability & Statistics	3	-	-	3
3	19HS0836	Discrete Mathematics	3	-	-	3
4	19MC9101	Computer Programming and Problem Solving	3	1	-	4
5	19MC9102	Computer Organization	3	-	-	3
6	19HS0811	Communicative English Lab	-	-	3	1.5
7	19MC9103	C Programming Lab	-	-	3	1.5
8	19MC9104	P. C. Software Lab	-	-	4	2
Contact periods/Week			15	1	10	21
			Total/Week 26			

**MCA I Year - II Semester**

S. No.	Course Code	Subject	L	T	P	C
1	19MB9056	Accounting & Financial Management	3	-	-	3
2	19MC9105	Object Oriented Programming through C++	3	-	-	3
3	19MC9106	Data Structures	3	-	-	3
4	19MC9107	Operating Systems	3	-	-	3
5	19MC9108	System Software	3	-	-	3
6	19MC9109	Programming in C++ Lab	-	-	4	2
7	19MC9110	Data Structures through C++ Lab	-	-	4	2
8	19MC9111	Operating Systems Lab	-	-	4	2
<b>Audit Course</b>						
9	19HS0843	Aptitude Practice – I	3	-	-	-
Contact periods/Week			18	-	12	21
			Total/Week 30			

## MCA II Year -I- Semester

S. No.	Course Code	Subject	L	T	P	C
1	19MC9112	Computer Networks	3	-	-	3
2	19MC9113	JAVA Programming	3	-	-	3
3	19MC9114	Database Management System	3	-	-	3
4	19MC9115	Advanced Programming (Python & R Languages)	3	-	-	3
5	19MC9116	Design and Analysis of Algorithms	3	-	-	3
6	19MC9117	JAVA Programming Lab	-	-	4	2
7	19MC9118	Database Management System Lab	-	-	4	2
8	19MC9119	Advanced Programming Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-I	Comprehensive Online Examination – I	-	-	-	1
<b>Audit Course</b>						
10	19HS0820	Comprehensive Soft Skills	3	-	-	-
Contact periods/Week			18	-	12	22
			Total/Week 30			

## MCA II Year-II- Semester

S. No.	Course Code	Subject	L	T	P	C
1	19MC9120	Data Warehousing and Data Mining	3	-	-	3
2	19MC9121	Web Technologies	3	-	-	3
3	19MC9122	Software Engineering	3	-	-	3
4	19MC9123 19MC9124 19MC9125 19MC9126 19MC9127	<b>Elective – I</b>				
		Software Testing				
		Artificial Intelligence	3	-	-	3
		Distributed Systems				
		Linux Programming				
		Network Security				
5	19MC9128 19MC9129 19MC9130 19MC9131 19MC9132	<b>Elective – II</b>				
		Human Computer Interaction				
		Social Networks and Semantic Web	3	-	-	3
		Computer Graphics				
		Internet of Things				
		E-Commerce				
6	19MC9133	Data Warehousing and Data Mining Lab	-	-	4	2
7	19MC9134	Web Technologies Lab	-	-	4	2
8	19MC9135	Software Engineering & UML Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination – II	-	-	-	1
<b>Audit Course</b>						
10	19HS0844	Aptitude Practice - II	3	-	-	-
Contact periods/Week			18	-	12	22
			Total/Week 30			

## MCA III Year-I- Semester

S. No.	Course Code	Subject	L	T	P	C
1	19MC9136	Cloud Computing	3	-	-	3
2	19MC9137	.Net Technologies	3	-	-	3
3	19MC9138	Mobile Application Development	3	-	-	3
4	19MC9139	<b>Elective – III</b> Cyber Security	3	-	-	3
	19MC9140	Software Project Management				
	19MC9141	Neural Networks & Fuzzy logic				
	19MC9142	Big Data Analytics				
	19MC9143	Model Driven Framework				
5	19MC9144	<b>Elective – IV</b> Bio-informatics	3	-	-	3
	19MC9145	Image Processing				
	19MC9146	Design Patterns				
	19MC9147	Machine Learning				
	19MC9148	Enterprise Resource Planning				
6	19MC9149	Cloud Computing Lab	-	-	4	2
7	19MC9150	.Net Technologies Lab	-	-	4	2
8	19MC9151	Mobile Application Development Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-III	Comprehensive Online Examination – III	-	-	-	1
<b>Audit Course</b>						
10	19HS0821	Advanced English Language and Communication Skills Lab	-	-	4	-
Contact periods/Week			15	-	16	22
			Total/Week 31			

## MCA III Year-II- Semester

S. No.	Course Code	Subject	L	T	P	C
1	19MC9152	Seminar	-	-	4	2
2	19MC9153	Dissertation	-	-	20	10
Contact periods/Week			-	-	24	12
			Total/Week 24			

**Note: L: Lecture Hour, T: Tutorial, P: Practical, C: Credit**

**Total Credits: 120**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**Master of Computer Applications (MCA)**

**MCA I Year -I- Semester**

S. No.	Course Code	Subject	L	T	P	C
1	18MC9101	Computer Programming and Problem Solving	3	1	0	4
2	18HS0810	English	3	0	0	3
3	18HS0835	Probability & Statistics	3	0	0	3
4	18HS0836	Discrete Mathematics	3	0	0	3
5	18MB9056	Accounting & Financial Management	3	0	0	3
6	18MC9102	P. C. Software Lab	0	0	3	1.5
7	18MC9103	C Programming Lab	0	0	4	2
8	18HS0811	English Lab	0	0	3	1.5
Contact periods/Week			15	1	10	21
			Total/Week 26			

**MCA I Year -II- Semester**

S. No.	Course Code	Subject	L	T	P	C
1	18MC9104	Operating Systems	3	0	0	3
2	18MC9105	Computer Organization	3	0	0	3
3	18MC9106	Object Oriented Programming through C++	3	0	0	3
4	18MC9107	Data Structures	3	0	0	3
5	18MC9108	Database Management Systems	3	0	0	3
6	18MC9109	Programming in C++ Lab	0	0	4	2
7	18MC9110	Data Structures through C Lab	0	0	4	2
8	18MC9111	Database Management Systems Lab	0	0	4	2
<b>Audit Course</b>						
9	18HS0843	Aptitude Practice – I	3	0	0	0
Contact periods/Week			18	0	12	21
			Total/Week 30			

## MCA II Year -I- Semester

S. No.	Course Code	Subject	L	T	P	C
1	18MC9112	Computer Networks	3	0	0	3
2	18MC9113	Java Programming	3	0	0	3
3	18MC9114	Software Engineering	3	0	0	3
4	18MC9115	Linux Programming	3	0	0	3
5	18MC9116	Data Warehousing and Data Mining	3	0	0	3
6	18MC9117	Java Programming Lab	0	0	4	2
7	18MC9118	Linux Programming Lab	0	0	4	2
8	18MC9119	Data Warehousing and Data Mining Lab	0	0	4	2
<b>Credit Course</b>						
9	COE-I	Comprehensive Online Examination-I	0	0	0	1
<b>Audit Course</b>						
10	18HS0820	Comprehensive Soft Skills	3	0	0	0
Contact periods/Week			18	0	12	22
			Total/Week 30			

## MCA II Year-II- Semester

S. No.	Course Code	Subject	L	T	P	C
1	18MC9120	Big Data Analytics	3	0	0	3
2	18MC9121	Web Technologies	3	0	0	3
3	18MC9122	Design and Analysis of Algorithms	3	0	0	3
4	18MC9123 18MC9124 18MC9125 18MC9126	<b>Department Elective – I</b>				
		Software Testing				
		Neural Networks & Fuzzy Logic	3	0	0	3
		Distributed Systems				
5	18MC9127 18MC9128 18MC9129 18MC9130	<b>Department Elective – II</b>				
		Human Computer Interaction				
		Social Networks and Semantic Web	3	0	0	3
		Computer Graphics				
		Internet of Things				
6	18MC9131	Big Data Analytics Lab	0	0	4	2
7	18MC9132	Web Technologies Lab	0	0	4	2
8	18MC9133	Design and Analysis of Algorithms Lab	0	0	4	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination-II	0	0	0	1
<b>Audit Course</b>						
10	18HS0844	Aptitude Practice - II	3	0	0	0
Contact periods/Week			18	0	12	22
			Total/Week 30			



## MCA III Year-I- Semester

S. No.	Course Code	Subject	L	T	P	C
1	18MC9134	.Net Technologies	3	0	0	3
2	18MC9135	Cloud Computing	3	0	0	3
3	18MC9136	Object Oriented Analysis and Design using UML	3	0	0	3
4	<b>Department Elective – III</b>					
	18MC9137	Cyber Security	3	0	0	3
	18MC9138	Software Project Management				
	18MC9139	Artificial Intelligence				
18MC9140	Information Retrieval Systems					
5	<b>Department Elective – IV</b>					
	18MC9141	M-Commerce	3	0	0	3
	18MC9142	Image Processing				
	18MC9143	Design Patterns				
18MC9144	Cognitive Computing					
6	18MC9145	.Net Technologies Lab	0	0	4	2
7	18MC9146	Cloud Computing Lab	0	0	4	2
8	18MC9147	UML Lab	0	0	4	2
<b>Credit Course</b>						
9	COE-III	Comprehensive Online Examination-III	0	0	0	1
<b>Audit Course</b>						
10	18HS0821	Advanced English Language and Communication Skills Lab	0	0	4	0
Contact periods/Week			15	0	16	22
Total/Week 31						

## MCA III Year-II- Semester

S. No.	Course Code	Subject	L	T	P	C
1	18MC9148	Seminar	0	0	4	2
2	18MC9149	Dissertation/ Thesis	0	0	20	10
Contact periods/Week			0	0	24	12
Total/Week 24						

**Note: L: Lecture Hour, T: Tutorial, P: Practical, C: Credit**



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**(AUTONOMOUS)**  
**DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS (MCA)**  
**COURSE STRUCTURE**

**I Year-I- Semester**

S.No.	Course Code	Subject	L	T	P	C
1	16HS601	Functional English	3	-	-	3
2	16HS613	Probability & Statistics	3	1	-	3
3	16HS618	Mathematical Foundations of Computer Science	3	1	-	3
4	16MC801	Computer Programming and Problem Solving	3	1	-	3
5	16MC802	Computer Organization	3	1	-	3
6	16HS607	English Language and Communication Skills Lab	-	-	4	2
7	16MC803	P. C. Software Lab	-	-	4	2
8	16MC804	C Programming Lab	-	-	4	2
Contact periods/Week			15	4	12	21
			Total/Week 31			

**I Year-II- Semester**

S.No.	Course Code	Subject	L	T	P	C
1	16HS610	Professional English	3	-	-	3
2	16MB749	Accounting & Financial Management	3	1	-	3
3	16MC805	OOPs through Java	3	1	-	3
4	16MC806	Data Structures	3	1	-	3
5	16MC807	Database Management Systems	3	1	-	3
6	16MC808	Java Programming Lab	-	-	4	2
7	16MC809	Data Structures through C Lab	-	-	4	2
8	16MC810	Database Management Systems Lab	-	-	4	2
<b>Audit Course</b>						
9	16HS616	Aptitude Practice – I	3	-	-	-
Contact periods/Week			18	4	12	21
			Total/Week 34			

## II Year-I- Semester

S.No.	Course Code	Subject	L	T	P	C
1	16MC811	Computer Networks	3	1	-	3
2	16MC812	Object Oriented Analysis and Design (Using UML)	3	1	-	3
3	16MC813	Operating Systems	3	1	-	3
4	16MC814	Linux Programming	3	1	-	3
5	16MC815	Data Warehousing and Mining	3	1	-	3
6	16MC816	UML Lab	-	-	4	2
7	16MC817	Operating Systems and Linux Programming Lab	-	-	4	2
8	16MC818	Data Warehousing and Mining Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-I	Comprehensive Online Examination-I	-	-	-	1
<b>Audit Course</b>						
10	16HS614	Comprehensive Soft Skills	3	-	-	-
Contact periods/Week			18	5	12	22
			Total/Week 35			

## II Year-II- Semester

S.No.	Course Code	Subject	L	T	P	C
1	16MC819	Software Engineering	3	1	-	3
2	16MC820	Web Technologies	3	1	-	3
3	16MC821	Computer Graphics	3	1	-	3
4	<b>Department Elective – I</b>		3	1	-	3
	16MC822	Big Data Analytics				
	16MC823	Neural Networks& Fuzzy logic				
	16MC824	Distributed Systems				
5	<b>Department Elective – II</b>		3	1	-	3
	16MC826	Information Security				
	16MC827	Social Networks and Semantic Web				
	16MC828	Geological Information Systems				
16MC829	.NET Technologies					
6	16MC830	Software Engineering Lab	-	-	4	2
7	16MC831	Web Technologies Lab	-	-	4	2
8	16MC832	Computer Graphics Lab			4	2
<b>Credit Course</b>						
9	COE-II	Comprehensive Online Examination-II	-	-	-	1
<b>Audit Course</b>						
10	16HS617	Aptitude Practice - II	3	-	-	-
Contact periods/Week			18	5	12	22
			Total/Week 35			

## III Year-I- Semester

S.No.	Course Code	Subject	L	T	P	C
1	16MC833	Software Testing	3	1	-	3
2	16MC834	Mobile Application Development	3	1	-	3
3	16MC835	Software Project Management	3	1	-	3
4		<b>Department Elective – III</b>				
	16MC836	Cyber Security	3	1	-	3
	16MC837	Image Processing				
	16MC838	Artificial Intelligence				
16MC839	Information Retrieval Systems					
5		<b>Department Elective – IV</b>				
	16MC840	M-Commerce	3	1	-	3
	16MC841	Cloud Computing				
	16MC842	Design Patterns				
16MC843	Cognitive Computing					
6	16MC844	Software Testing Lab	-	-	4	2
7	16MC845	Mobile Application Development Lab	-	-	4	2
8	16MC846	Software Project Management Lab	-	-	4	2
<b>Credit Course</b>						
9	COE-III	Comprehensive Online Examination-III	-	-	-	1
<b>Audit Course</b>						
10	16HS615	Advanced English Language and Communication Skills Lab	-	-	4	-
Contact periods/Week			15	5	16	22
			Total/Week 36			

## III Year-II- Semester

S.No	Course Code	Subject	L	T	P	C
1	16MC847	Seminar	-	-	4	2
2	16MC848	Dissertation/ Thesis	-	-	20	10
Contact periods/Week			-	-	24	12
			Total/Week 24			

**Note: L: Lecture Hour, T: Tutorial, P: Practical, C: Credit**