



# VidyaJyothi Institute of Technology

(An Autonomous Institution)

(Accredited by NAAC, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH)

Aziznagar Gate, C.B. Post, Hyderabad-500 075

## Department of Electronics and Communication Engineering

### COURSE STRUCTURE FOR M.TECH (Embedded Systems) R19

#### I Semester

S.No.	Category	Course Title	L	T	P	C
1	19D4E21101	Embedded System Design	4	0	0	4
2	19D4CS1104	Microcontrollers for Embedded System Design	4	0	0	4
3	19D4CS1105	Embedded Real Time Operating Systems	4	0	0	4
4	19D4CS1101 19D4E21102 19D4E11104	VLSI Technology Advanced Computer Architecture Embedded Computing	3	0	0	3
5	19D4E11101 19D4E11102 19D4E21104	Advanced Digital System Design Hardware Software Co-Design Soft Computing Techniques	3	0	0	3
6	191EOE1101	Internet of Things	3	0	0	3
7	19D4LB1102	Embedded Systems Laboratory	0	0	3	2
8	19D4SM1101	Seminar	0	0	3	2
<b>Total</b>			<b>21</b>	<b>0</b>	<b>6</b>	<b>25</b>

#### II Semester

S.No.	Category	Course Title	L	T	P	C
1	19D4CS1204	Embedded Networking	4	0	0	4
2	19D4E41202	System On Chip Architecture	4	0	0	4
3	19D4CS1205	Sensors and Actuators	4	0	0	4
4	19D4E31204 19D4E31202 19D4E31205	Digital Signal Processors & Architectures Scripting Languages Wireless Communication and Networks	3	0	0	3
5	19D4CS1203 19D4E41204 19D4E41205	Design for Testability Multimedia and Signal Coding CPLD & FPGA Arch. & Applications	3	0	0	3
6	191EOE1201	Artificial Intelligence & Machine Learning	3	0	0	3
7	19D4LB1202	Advanced Embedded Systems Laboratory	0	0	3	2
8	19D4SM1201	Seminar	0	0	3	2
<b>Total</b>			<b>21</b>	<b>0</b>	<b>6</b>	<b>25</b>

**L: Lecture**

**T: Tutorial**

**P: Practical**

### III Semester

S.No.		Course Title	L	T	P	C
1	19DDCS1207	Technical Paper Writing	0	3	0	2
2	19D4CV2102	Comprehensive Viva-Voce	0	0	0	4
3	19D4PW2101	Project work Review II	0	0	22	8
		<b>Total</b>	<b>0</b>	<b>3</b>	<b>22</b>	<b>14</b>

### IV Semester

S.No.		Course Title	L	T	P	C
1	19D4PW2202	Project work Review III	0	0	24	8
2	19D4PW2201	Project Evaluation (Viva-Voce)	0	0	0	16
		<b>Total</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>24</b>

**\*Open Elective subjects must be chosen from the list of open electives offered by OTHER departments.**

**L: Lecture**

**T: Tutorial**

**P: Practical**

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(Aziz Nagar, C.B.Post, Hyderabad -500075)

*M.Tech R15 Regulations*

## M.TECH. - EMBEDDED SYSTEM DESIGN (Course Structure)

### I Year – I Semester

Subject Code	Category	Course Title	L	P	C
15D4CS1101	Core Course I	Embedded System Design	4	--	4
15D4CS1102	Core Course II	ARM Architectures	4	--	4
15D4CS1103	Core Course III	Real Time Operating Systems	4	--	4
15D4E11101 15D4E11102 15D4E11103	Core Elective I	Advanced Computer Architecture VLSI Technology and Design Embedded Computing	4	--	4
15D4E21101 15D4E21102 15D4E21103	Core Elective II	Digital System Design Embedded C Design for Testability	4	--	4
15D4OE1101 15D4OE1102 15D4OE1103	Open Elective I	TCP/IP Networks Coding Theory and Techniques Soft Computing Techniques	4	--	4
15D4LB1101	Laboratory I	Embedded Systems Laboratory	--	4	2
15D4SM1101	Seminar I	Seminar	--	4	2
<b>Total Credits</b>			<b>24</b>	<b>8</b>	<b>28</b>

### I Year – II Semester

Subject Code	Category	Course Title	L	P	C
15D4CS1204	Core Course IV	Digital Signal Processors and Architectures	4	--	4
15D4CS1205	Core Course V	Embedded Networking	4	--	4
15D4CS1206	Core Course VI	Sensors and Actuators	4	--	4
15D4E31201 15D4E31202 15D4E31203	Core Elective III	CPLD and FPGA Architectures and Applications Wireless Communication and Networks <b>System On Chip Architecture</b>	4	--	4
15D4E41201 15D4E41202 15D4E41203	Core Elective IV	Multimedia and Signal Coding Network Security and Cryptography <b>Hardware Software Co-Design</b>	4	--	4
15D4OE1201 15D4OE1202 15D4OE1203	Open Elective II	Scripting languages <b>Adhoc Wireless and Sensor Networks</b> Device Modeling	4	--	4
15D4LB1201	Laboratory II	Advanced Embedded Systems Laboratory	--	4	2
15D4SM1201	Seminar II	Seminar	--	4	2
<b>Total Credits</b>			<b>24</b>	<b>8</b>	<b>28</b>

### II Year - I Semester

Subject Code	Course Title	L	P	C
15D4CV2101	Comprehensive Viva-Voce	--	--	4
15D4PW2101	Project work Review I	--	24	12
<b>Total Credits</b>		--	24	<b>16</b>

**II Year - II Semester**

<b>Subject Code</b>	<b>Course Title</b>	<b>L</b>	<b>P</b>	<b>C</b>
15D4PW2202	Project work Review II	--	8	4
15D4PE2201	Project Evaluation (Viva-Voce)	--	16	12
	<b>Total Credits</b>	<b>--</b>	<b>24</b>	<b>16</b>