

**G.V.P.COLLEGE OF ENGINEERING (Autonomous)**  
**Department of Electronics and Communication Engineering**

**M.Tech. (Embedded Systems & VLSI Design) Course Structure**

<b>COURSE NO.</b>	<b>SUBJECT</b>	<b>CONTACT Hours / Week</b>	<b>CREDITS</b>
<b>FIRST SEMESTER</b>			
1	Embedded System Concepts	4	4
2	VLSI Technology & Design	4	4
3	Digital Design through HDL	4	4
4	Digital Signal Processing	4	4
5	Microcontroller Applications	4	4
Elective I			
	a) Digital Data Communications		
6	b) CPLD and FPGA Architecture and Applications	4	4
	c) System Modelling and Simulation		
7	HDL Programming Laboratory	3	2
<b>SECOND SEMESTER</b>			
1	Embedded Computing Systems	4	4
2	Analog IC Design	4	4
3	Low Power VLSI Design	4	4
4	DSP Processors and Architecture	4	4
5	Digital System Design	4	4
Elective II			
	a) Electronic Design Automation Tools		
6	b) Image Processing	4	4
	c) Computer Networks		
7	Embedded Systems Lab	3	2
<b>THIRD &amp; FOURTH SEMESTERS</b>			
1	SEMINAR		
2	PROJECT		

## **M.Tech. (Communications & Signal Processing) Course Structure**

<b>COURSE NO.</b>	<b>SUBJECT</b>	<b>CONTACT Hours / Week</b>	<b>CREDITS</b>
<b>FIRST SEMESTER</b>			
1	Communication Theory	4	4
2	Digital Data Communications	4	4
3	Coding Theory and Practice	4	4
4	Transform Techniques	4	4
5	Digital Signal Processing	4	4
Elective I			
6	a) VLSI Technology & Design b) Microcontroller Applications	4	4
7	Digital Signal Processing Lab	3	2
<b>SECOND SEMESTER</b>			
1	Wireless Communications & Networks	4	4
2	Fiber Optical Communication Systems	4	4
3	Computer Networks	4	4
4	Advanced Digital Signal Processing	4	4
5	DSP Processors and Architecture	4	4
Elective II			
6	a) Image Processing b) Embedded System Concepts	4	4
7	Advanced Communication Laboratory	3	2
<b>THIRD &amp; FOURTH SEMESTERS</b>			
1	SEMINAR		
2	PROJECT		

## Faculty handling M.Tech. Courses

### 1. Embedded Systems and VLSI Design

<i>S.No.</i>	<i>Name of the Subject</i>	<i>Name of the faculty</i>	<i>Total Teaching Experience</i>
01	Embedded System Concepts	Dr.D.S.Murty	8+ 20 years Industry
02	VLSI Technology and Design	Dr.T.N.S.Somayaji	40 years
03	Digital Design through HDL	Smt.V.Leela Rani	8 Years
04	Digital Signal Processing	Smt.B.Leela Kumari	8 Years
05	Microcontroller Applications	Dr.N.Bala Subhramanyam	17 Years
06	a) Digital Data Communications	Smt.Ch.Phanisri	8 Years
	b) CPLD and FPGA Architecture and Applications	Smt.V.Leela Rani	8 Years
	c) System Modelling and Simulation	Dr.D.S.Murty	8+ 20 years Industry

### 2. Communications and Signal Processing

<i>S.No.</i>	<i>Name of the Subject</i>	<i>Name of the faculty</i>	<i>Total Teaching Experience</i>
01	Communication Theory	Smt.N.Deepika Rani	8 years
02	Digital Data Communications	Smt.Ch.Phanisri	8 years
03	Coding Theory and Practice	Dr.M.V.S.Sairam	14 Years
04	Transform Techniques	Sri.B.Jagadeesh	9 Years
05	Digital Signal Processing	Smt.B.Leela Kumari	8 Years
06	a) VLSI Technology and Design	Dr.T.N.S.Somayaji	40 Years
	b) Microcontroller Applications	Dr.N.Bala Subhramanyam	17 Years

### 3. Faculty handling M.Tech Programmes and their area of interest

<i>S.No.</i>	<i>Name of the Faculty</i>	<i>Qualification</i>	<i>Area of Interest</i>	<i>Number of Publications</i>
01	Dr.T.N.S.Somayaji	Ph.D.	VLSI Design	20 Int.Journals + 40 Conf.
02	Dr.D.S.Murty	Ph.D.	Embedded Systems	3 Int.Journals + 10 Conf.
03	Dr.N.Balasubhramanyam	Ph.D.	Microcontrollers	10 Conf.
04	Dr.M.V.S.Sairam	Ph.D.	Digital Communications	2 Int. Journals + 7 Conf.
05	Sri.B.Jagadeesh	M.Tech, (Ph.D.)	Signal & Image Processing	5 Int.Conf. + 2 Nat. Conf.
06	Smt.V.Leela Rani	M.Tech.	VLSI Design	2 Int.Conf.
07	Smt.Ch.Phanisri	M.Tech, (Ph.D.)	Embedded Networking Systems	2 Int.Conf.
08	Smt.B.Leela Kumari	M.Tech, (Ph.D.)	Statistical Signal Processing	2 Int.Conf.
09	Smt.N.Deepika Rani	M.Tech, (Ph.D.)	Communications(Improving Directivity in arrays)	1 Int.Journal + 2 Conf.

### 4. Expert Lectures Planning in the academic year 2010-2011

<i>SL.NO.</i>	<i>NAME OF THE PERSON &amp; DESIGNATION</i>	<i>TOPIC</i>	<i>MONTH</i>
01.	Dr.Rajeev Tripathi, Professor of ECE., Dean of Academics, NIT, Allahabad.	Wireless Communications	November, 2010
02.	Dr.K.Satya Prasad, Professor of ECE., Director of Evaluation, J.N.T.University, Kakinada.	Digital Signal Processing	November, 2010
03.	Dr.B.Prabhakara Rao, Professor of ECE. Director of Institute of Science and Technology, J.N.T.University, Kakinada.	Digital Communications	December, 2010
04.	Dr..K.Raja Rajeswari, Professor of ECE., Andhra University.	Digital Signal Processor	January, 2011
05	Dr.N.S.Murthy Professor of E.C.E. NIT, Warangal.	VLSI	February, 2011

## 5. Lab Infrastructure:

### 1. VLSI Lab (HDL Programming Lab):

The following are the list of Softwares /Tools available in the VLSI Laboratory.

S.No	Softwares/Tools	Number of systems loaded with Software/Tool
1	Cadence Tools (Analog & Digital platforms)	10 Nos.
2	Xilinx ISE 9.1i version from Xilinx for synthesis	17 Nos.
3	Modelsim SE6.0a version from mentor graphics for simulation.	17 Nos.
4	Server (Linux based)	10 systems are connected to server

### 2. Digital Signal Processing Laboratory:

The following are the list of Softwares /Tools available in the DSP Laboratory.

S.No	Softwares/Tools	Number of systems loaded with Software/Tool
1	Code Composer Studio Version 3.1	15 Nos.
2	TMS 320C6713 DSK Kits	15 Nos.
3	MATLAB Software (Signal Processing Tool Box)	15 Nos.
4	Computer Terminals	15 Systems