

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE: WARANGAL**  
**DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING**

**Scheme of Instruction and Evaluation for Two Year Postgraduate Programme**  
**M.TECH. (VLSI & EMBEDDED SYSTEMS)**

**SEMESTER - I**

Course Code	Course Name	Periods per Week			Credits	Evaluation Scheme				
		L	T	P		CIE			ESE	Total Marks
						TA	MSE	Total		
P14VE101	Digital Design	3	1	-	4	15	25	40	60	100
P14VE102	VLSI Technology	3	1	-	4	15	25	40	60	100
P14VE103	Discrete Mathematics & Optimization Techniques	3	1	-	4	15	25	40	60	100
P14VE104	Embedded System Design	3	1	-	4	15	25	40	60	100
P14VE105	Elective-I	3	1	-	4	15	25	40	60	100
P14VE106	Elective-II	3	1	-	4	15	25	40	60	100
P14VE107	VLSI Technology Laboratory	-	-	3	2	40	--	40	60	100
P14VE108	Digital Design Laboratory	-	-	3	2	40	-	40	60	100
P14VE109	Seminar	-	-		2	100	-	100	-	100
	<b>Total</b>	<b>18</b>	<b>6</b>	<b>6</b>	<b>30</b>	<b>270</b>	<b>150</b>	<b>420</b>	<b>480</b>	<b>900</b>

**Elective-I**

- P14VE 105 A Hardware Description Languages
- P14VE 105 B Semiconductor Device Modeling
- P14VE 105 C Scripting Languages for VLSI Design Automation
- P14VE 105 D Computer Aided Circuit Simulation

**Elective-II**

- P14VE 106 A Advanced Microprocessor and Microcontroller
- P14VE 106 B Data Communication & Computer Networks
- P14VE 106 C Data Structures & Algorithm Analysis
- P14VE 106 D Digital Filter Design

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**SEMESTER - II**

Course Code	Course Name	Periods per Week			Credits	Evaluation Scheme				
		L	T	P		CIE			ESE	Total Marks
						TA	MSE	Total		
P14VE201	Mixed Signal Design	3	1	-	4	15	25	40	60	100
P14VE202	RTOS for Embedded Systems	3	1	-	4	15	25	40	60	100
P14VE203	Low Power VLSI Design	3	1	-	4	15	25	40	60	100
P14VE204	Hardware & Software Co-Design	3	1	-	4	15	25	40	60	100
P14VE205	Elective-III	3	1	-	4	15	25	40	60	100
P14VE206	Elective-IV	3	1	-	4	15	25	40	60	100
P14VE207	Embedded System Design Laboratory	-	-	3	2	40	--	40	60	100
P14VE208	Mixed Signal Design Laboratory	-	-	3	2	40	-	40	60	100
P14VE209	Comprehensive Viva-Voce	-	-	-	2	--	--	--	100	100
	<b>Total</b>	<b>18</b>	<b>6</b>	<b>6</b>	<b>30</b>	<b>170</b>	<b>150</b>	<b>320</b>	<b>580</b>	<b>900</b>

**Elective-III**

P14VE205A	ASIC Design
P14VE205B	VLSI Signal Processing
P14VE205C	Microchip Fabrication Techniques
P14VE205D	Design for Testability

**Elective-IV**

P14VE206A	Industrial Applications of Embedded Microcontrollers
P14VE206B	Advanced Computer Systems Architecture
P14VE206C	Internet of Things
P14VE206D	Introduction to MEMS

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**SEMESTER - III**

Course Code	Course Name	Periods per Week	Credits	Evaluation Scheme				
				CIE			ESE	Total Marks
				TA	MSE	Total		
P14VE301	Industrial Training	08 weeks	4	100	-	100	-	100
P14VE302	Dissertation	16 weeks	8	100	-	100	-	100
	<b>Total</b>	<b>24 weeks</b>	<b>12</b>	<b>200</b>	<b>-</b>	<b>200</b>	<b>-</b>	<b>200</b>

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**SEMESTER - IV**

Course Code	Name of the Course	Periods per Week	Credits	Evaluation Scheme				
				CIE			ESE	Total Marks
				TA	MSE	Total		
P14VE401	Dissertation	24 weeks	12	40	-	40	60	100
	<b>Total</b>	<b>24 weeks</b>	<b>12</b>	<b>40</b>	<b>-</b>	<b>40</b>	<b>60</b>	<b>100</b>